

Deceptive datives: prepositional case in Latvian

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Abstract In this paper, I look at the distribution of case forms in Latvian prepositional constructions. Latvian prepositions assign either the genitive or the accusative case to their complements based partially on the meaning of the preposition and partially on its idiosyncratic properties. This pattern is disrupted in the plural, where all complements of prepositions show up invariably in the dative case. I investigate the nature of this unusual pattern and provide a post-syntactic account of the data, in which I claim that the observed asymmetry is the result of a cumulative effect in Latvian grammar: case may surface unfaithfully in certain configurations where a particular marked combination of case and number features occurs in a position where certain case feature values are dispreferred to begin with. This effect arose diachronically as a repair mechanism after the language had lost one of its grammatical cases, the instrumental. This cumulative effect is captured using the framework of Harmonic Grammar. I also argue against a purely syntactic account of the data.

Keywords: prepositional phrases; case; OT; Harmonic Grammar; cumulative effects; post-syntax; Minimalism

1 Core data

I will begin by introducing the basic facts regarding the behavior of Latvian nominals in prepositional phrases. Latvian has a system of five grammatical cases (nominative, genitive, dative, accusative and locative), as well as two grammatical numbers (singular and plural) distinguished on DPs (determiner phrases). This can be seen in Table 1. The language also has a

	Sg	Pl
N	aukst-ais snieg-s	aukst-ie snieg-i
G	aukst-ā snieg-a	aukst-o snieg-u
D	aukst-ajam snieg-am	aukst-ajiem snieg-iem
A	aukst-o snieg-u	aukst-os snieg-us
L	aukst-ajā snieg-ā	aukst-ajos snieg-os

Table 1: A sample paradigm: *aukstais sniegš* ‘the cold snow’.

number of adpositions used to express fine-grained local and temporal relations, as well as other relations which cannot be adequately rendered using the limited case inventory.

A preposition in Latvian requires its complement to be in one of the following grammatical cases: *genitive* or *accusative*.¹ Two examples of prepositional case assignment can be seen in (1) below.²

(1) *Case assignment in Latvian PPs:*

- a. Andr-is staigā pa mež-u.
A-NOM.SG walk.PRS.3 around forest-ACC.SG
‘Andris is walking around the forest.’
- b. Andr-is dzīvo aiz mež-a.
A-NOM.SG live.3.PRS behind forest-GEN.SG
‘Andris lives on the other side of the forest.’

In one instance, two homophonous prepositions are distinguished based on the case that they assign to their complements:

(2) *Superessive ‘uz’ + Gen (static and dynamic):*

- a. Ziv-s ir uz gald-a.
fish-NOM.SG be.3.PRS on table-GEN.SG
‘The fish is on the table.’
- b. Liek-u ziv-i uz gald-a.
put.PRS-1SG fish-ACC.SG on table-GEN.SG
‘I am putting the fish onto the table.’

¹ The fact that there are two prepositions which require the dative case has no implications for the analysis pursued in this paper.

² All the examples in this paper have been either provided by my consultants, both native speakers of Latvian living in Latvia, or adapted from Prauliņš (2012).

As the examples in (5) show, the difference in meaning between the superesive *uz* and the generic directional *uz* is compromised. Crucially, the forms ending in /-iem/ are specifically dative forms that are not syncretic with any other forms in the paradigm. Outside of PPs (prepositional phrases), plural DPs behave absolutely normally showing a full paradigm of cases. This can be seen in the example below where all the five plural cases are featured.

- (6) a. Mež-i zied.
forest-NOM.PL blossom.PRS.3
'The forests are blossoming.'
- b. Mež-u kok-i.
forest-GEN.PL tree-NOM.PL
'The trees of the forests.'
- c. Palīdz-iet mež-iem.
help-IMP.2PL forest-DAT.PL
'Help the forests!'
- d. Es redz-u mež-us.
1SG.NOM see.PRS-1SG forest-ACC.PL
'I see the forests.'
- e. Mēs spēlē-j-am-ies mež-os.
1PL.NOM play-EP-1PL.PRS-RFL forest-LOC.PL
'We play in the forests.'

1.2 Other adpositions

Along with the numerous prepositions, Latvian has four common postpositions: *dēļ* (*for/because of/for the sake of*), *labad* (*for the sake of*), *pēc* (*because of*). They uniformly take the genitive case in both numbers.⁴

⁴ I will show at the end of the paper how the postpositions can be captured using the analysis I will have developed. The behavior of the genitive postpositions is illustrated in the example below.

- (i) a. Cieš-u man-a bērn-a dēļ.
suffer.PRS-1SG my-M.GEN.SG child.M-GEN.SG for
'I suffer for my child.'
- b. Cieš-u man-u bērn-u dēļ.
suffer.PRS-1SG my-M.GEN.PL child.M-GEN.PL for
'I suffer for my children.'

Some adverbs (which, unlike prepositions, do not have an obligatory argument) are capable of taking an optional DP-complement. In this case, they function as pre- or postpositions (each one chooses its linear position relative to the complement idiosyncratically), and their complement is obligatorily in the *dative* case:

- (7) a. Pretī bij-a liel-a māj-a.
 opposite be.PST-3 big-F.NOM.SG house.F-NOM.SG
 ‘Opposite, there was a big house.’
- b. Viņ-š nāc-a man pretī.
 3SG-M.NOM.SG come.PST-3 1SG.DAT opposite
 ‘He came toward me.’

I assume these adverbs assign an inherent dative case to their complement DPs when they do take a complement. This will not pose any challenges for the analysis developed below.

1.3 Section summary

So far, we have seen some basic facts about Latvian prepositions and their main case-assigning properties. I have also shown that plural DPs are invariably in the dative case after all prepositions, with other case forms being generally available in the language, but ungrammatical in this narrowly defined context. This asymmetry will be the main focus of the remaining part of the paper. In the following section, I will present an analysis of the data, followed by a subsection showing how this pattern arose in the language. Finally, the last section of the paper will argue in favor of this issue being a morphological phenomenon, rather than something happening in narrow syntax.

2 The analysis

In what follows, I will develop a morphological analysis of the data from the previous section. I will argue that Latvian prepositions always assign the genitive / accusative case to their complement DPs in narrow syntax, regardless of the ϕ -features of the DP. The syntactic case features are then modified at the syntax-PF (phonological form) interface in certain marked configurations. These configurations involve a cumulative effect in Latvian grammar: certain marked combinations of case and ϕ -features, though tol-

erated in most contexts, are ruled out when genitive / accusative DPs are located in non-structural positions.

I will begin this section by presenting some evidence regarding the distribution of structural and inherent case in Latvian.

2.1 Structural and inherent case in Latvian

The dichotomy into structural and inherent case is well known in modern linguistic theories (e.g. [McFadden 2004](#); [Haider 1985](#); [Baker 2015](#)). Inherent case is assigned locally to DPs by the lexical heads licensing them. Inherent case is frequently associated and goes hand-in-hand with θ -role assignment.⁵ Structural case, on the other hand, is assigned to DPs located in particular structural positions relative to the positions of other DPs in a derivation, such as those of the direct object and the subject.

Inherent case marking precedes structural case in a derivation ([McFadden 2015](#)). It is therefore assumed in some theories, e.g. the Dependent Case theory ([Marantz 1991](#); [Baker & Vinokurova 2010](#); [Baker 2015](#)), that inherent case is assigned upon merging the respective DP with their licensing lexical heads, while structural case assignment happens once the syntactic structure has been built and the phase ([Chomsky 1999](#)) is ready to be spelled out.

Like in many other languages, one can distinguish between instances of inherent and structural case in Latvian. The cases which can be assigned positionally are the nominative, genitive and accusative. The nominative case is typical for the subject position, i.e. Spec-v or Spec-T (depending on whether EPP-movement ([Adger 2003](#); [Koenen & Zeijlstra 2017](#)) takes place in Latvian, which I will not be discussing in this paper). It also shows up on nominal predicates (probably as a default case⁶, cf. [Baker 2015](#)).

(8) *Subject nominative and predicative nominative:*

- a. Uld-is sa-lauz-a nūj-u.
 U-NOM.SG PFV-break.PST-3 stick-ACC.SG
 ‘Uldis broke the stick.’
- b. Tas ir kok-s.
 this.M.NOM.SG is tree.M-NOM.SG
 ‘This is a tree.’

⁵ If it’s not associated with a θ -role, it is then called *lexical case*, such as the German genitive after the verb *gedenken* ‘to commemorate’.

⁶ I will treat default nominatives as structural in all positions.

The accusative case is the case of the internal argument of a bivalent verb as long as its θ -role does not qualify for inherent case assignment:

- (9) Laps-a nogalinā-j-a putn-u.
fox-NOM.SG kill.PST-EP-3 bird-ACC.SG
'The fox killed the bird.'

Bivalent verbs with the recipient or benefactor role on the object assign an inherent dative:

- (10) Tēv-s palīdz zēn-am.
father-NOM.SG help.PRS.3 boy-DAT.SG
'The father is helping the boy.'

Unlike its sibling Lithuanian, Latvian does not have the genitive of negation, so the structural case of a verbal complement is always the accusative:⁷

- | | Lithuanian: | | Latvian: | |
|------|-------------------|------------------------|-------------------|------------------|
| | Ger- <i>iu</i> | pien- <i>ą</i> . | Dzer- <i>u</i> | pien- <i>u</i> . |
| | drink-1SG | milk-GEN.SG | drink-1SG | milk-ACC.SG |
| (11) | | ‘I drink milk.’ | | |
| | Ne-ger- <i>iu</i> | pien- <i>o</i> . | Ne-dzer- <i>u</i> | pien- <i>u</i> . |
| | NEG-drink-1SG | milk-GEN.SG | NEG-drink-1SG | milk-ACC.SG |
| | | ‘I do not drink milk.’ | | |

Structural accusative becomes nominative under passivization (with no grammatical way to express an oblique agentive argument in passive structures):

- (12) a. Es iz-lasī-j-u grāmat-u.
1SG.NOM PREV-read.PST-EP-1SG book-ACC.SG
'I read the book.'
- b. Grāmat-a tik-a iz-lasī-t-a.
book.F-NOM.SG AUX.PST-3 PREV-read-PASS.PST-F.NOM.SG
'The book was read.'

⁷ The genitive of negation was robust in the earlier stages of Latvian. It has been replaced with the structural accusative. The only verb after which the genitive consistently appears in Modern Latvian is the portmanteau form of the negated copula:

- (i) Nav naud-as.
COP.NEG.PRS.3 money-GEN.SG
'There is no money.'

The genitive case is no longer assigned by verbs lexically (unlike Russian or Lithuanian).⁸ It is canonically the structural case on DPs embedded in other DPs (possessors, internal arguments of nominalized verbs):

- (13) a. At-a cepur-e ir liel-a.
 A-GEN.SG hat.F-NOM.SG is big-F.NOM.SG
 ‘Atis’s hat is big.’ [Possessor]
- b. Pilsēt-as iznīcinā-šan-a.
 city-GEN.SG destroy-NMNLZ-NOM.SG
 ‘The destruction of the city.’ [Theme]

The genitive and the accusative may also be inherently assigned by prepositions, as in (1). These two cases may therefore appear as structural, as well as inherent cases depending on the concrete mechanism used to assign them. However, since they *can* be structural, their use as inherent cases will always incur a violation of a constraint active in the grammar (see below).

The dative and the locative cases are always inherent in Latvian. The dative is almost always associated with a specific thematic role (and therefore assigned locally by the licensing verb when the object is merged in), while the locative is either lexically assigned by a verb or, in adverbials, introduced by a silent preposition, which assigns it the locative case (see Baker 2015 for more information on silent P-heads):

- (14) a. Es dod-u puķ-i Laur-ai. [θ:Rec]
 1SG.NOM give.PRS-1SG flower-ACC.SG L-DAT.SG
 ‘I am giving Laura a flower.’
- b. Es palīdz-u Laur-ai. [θ:Ben]
 1SG.NOM help.PRS-1SG L-DAT.SG
 ‘I am helping Laura.’
- c. Tagad es-am [pp Ø [P, Cas:Loc] [DP Viļņ-ā.]]
 now be.PRS-1PL V-LOC.SG
 ‘We are in Vilnius now.’

A construction obligatorily featuring the dative case is the debitive mood:

- (15) Man jā-mazg-ā veļ-a. [quirky DAT]
 1SG.DAT DEB-wash-3.PRS laundry-NOM.SG

⁸ Some verbs, such as *trūkt* ‘to lack’, used to assign a lexical genitive, but they no longer do so in the modern language. Forms like *trūkt* + *Gen* are considered old-fashioned by present-day speakers.

‘I need to wash the laundry.’

In (15), the logical subject receives a ‘quirky’ dative case. Unlike instances of quirky case in languages such as Icelandic (Sigurðsson 1992), this dative on subjects is not a property of particular verbs but rather specific verbal forms. This case is assigned locally by the finite T-head bearing the modal feature [Debitive]. The fact that the dative subject is an instance of inherent case correctly predicts that it should will block dependent accusative on the object. Indeed, the internal argument shows up in the default nominative case, with the accusative form *veļ-u* being ungrammatical.

Similarly, the dative case shows up on subjects of certain types of non-finite verbs (Prauliniš 2012). One such structure requiring a dative subject is a converb clause with the invariable *ot*-form (simultaneous participle/converb) of the embedded verb:⁹

- (16) Bērn-iem dzied-ot, es smē-j-o-s.
 child-DAT.PL sing-CONV I laugh.PST-EP-1SG-RFL
 ‘While the children were singing, I was laughing.’

I will assume that, with the agentive subject being initially introduced by the v-head (a standard assumption in Minimalism, e.g. Adger 2003; Koenenman & Zeijlstra 2017), the v-head is pre-specified for the participial form and bears a dative case feature which it lexically assigns to the subject. Alternatively, if Latvian has EPP, one could assume that the non-finite T-head assigns the dative case to the DP in its specifier position, just like in the case with quirky subjects.¹⁰

Passivization of bivalent verbs with dative objects is possible with preservation of the dative and default agreement on the passive participle, which

⁹ This kind of converb clause can be formed using any verb regardless of its semantics and valency type.

¹⁰ An interesting question is why the structural accusative is still assigned in these predications in case the verb is bivalent:

- (i) Bērn-iem dzied-ot dziesm-u ...
 child-DAT.PL sing-CONV song-ACC.SG
 ‘As the children sang the song ...’

We saw above that quirky datives on debitive subjects were successful in blocking dependent case assignment to the object. Why exactly dependent case assignment is not blocked in non-finite clauses is not a trivial question. Perhaps, this has to do with the timing of case assignment or possibly with A-movement operations in certain constructions.

	Structural	Inherent
N	✓	✗
G	✓	✓
D	✗	✓
A	✓	✓
L	✗	✓

Table 2: Structural vs inherent case in Latvian.

further confirms the fact that the dative is an inherent case in the system (McFadden 2004; 2015):

- (17) a. Es palīdzēj-u Rūt-ai.
 1SG.NOM help.PST-1SG R-DAT.SG
 ‘I helped Ruta.’
- b. Rūt-ai tik-a palīdzē-t-s.
 R.F-DAT.SG AUX.PASS.PST-3 help-PASS.PST-M.NOM.SG
 ‘Ruta was helped.’

In (17), the benefactor argument is a female person. When the sentence is made passive, the participle does not agree with the dative subject and displays default masculine singular agreement.

The distribution of the five cases in Latvian along the structural/inherent line is summarized in Table 2. Two of the five cases may be either structural or inherent, depending on where and how they are assigned. One case (the nominative) is strictly structural (or default), with the remaining two (dative and locative) being always inherent. This distribution will be relevant for the analysis sketched out in the following subsection.

2.2 A cumulative effect in Latvian grammar

In the paragraphs above, I spoke about the structural/inherent case distinction in the grammars of natural languages and Latvian in particular. The following generalizations can be stated about the different types of case:

- i. Structural case is important for distinguishing core grammatical positions within the clausal hierarchy. In many languages, it is the essential linking mechanism;
- ii. Inherent case is usually tied to thematic roles and helps indicate the exact semantic relationship between a licensing head and its complement (e.g. datives on recipient/benefactor objects);

- iii. Purely lexical case is semantically obscure from the point of view of synchronic grammar. All instances of idiosyncratic case assignment must have been, at some point, grounded in semantic or structural principles no longer visible in the language.

Structural case, being associated with core syntactic positions, is something that languages naturally tend to mark unambiguously. In other words, structural case should ideally have dedicated forms and not overlap in form with inherent or idiosyncratically assigned cases. However, we saw in Table 2 that two of the Latvian cases – the genitive and the accusative – show up as both structural and inherent case. Every time these two cases are assigned lexically (by a preposition), it incurs a violation of the above-mentioned principle, which I will informally call STRUCCASE for now. This principle is not violated only in those instances where the accusative is the case of the internal argument of a verb, and the genitive is the case of a dependent DP embedded within another DP:

	Gen/Acc	STRUCCASE
(18)	$V_{tr} + DP [Acc]$	✓
	$P_{Acc} + DP [Acc]$	*
	$[_{DP} \dots DP [Gen] \dots]$	✓
	$P_{Gen} + DP [Gen]$	*

At the same time, there is another principle in the grammar which makes sure that each and every surface output mirrors the respective input. This principle will work to preserve lexical case assigned by prepositions in Latvian, which I assume to be idiosyncratic in the modern language. I will call this principle PRESERVECAGE for the time being.

	Gen/Acc	PRESERVECAGE
(19)	$P_{Acc} + DP [Acc]$	✓
	$P_{Acc} + DP [Gen/Dat]$	*

Thus, in the sentence in (20), the accusative DP is not the internal argument of a transitive verb, so STRUCCASE is violated. However, with PRESERVECAGE being ranked higher than the former principle, nothing happens and the syntactically assigned accusative surfaces faithfully.

- (20) Ēd-u [æ:-] ar dakš-u.
eat.PRS-1SG with fork-ACC.SG
'I am eating with a fork.'

Speaking in OT-terms (Prince & Smolensky 2004), this can be demonstrated in the following manner:

(21) *PRESERVECASE wins over STRUCCASE:*

	Inp: P _{Acc} + DP	PRESERVECASE	STRUCCASE
a.	☞ Acc		*
b.	Dat	*!	
c.	Gen	*!	*

The interaction of these two principles creates a natural tension in the grammar. On the one hand, cases which are used in structural positions ‘want’ to show up only in these positions. On the other hand, some heads assign these cases lexically and attempt to realize them as such on the surface. Since we do get accusative and genitive nominal phrases after prepositions in Latvian, I infer that STRUCCASE alone cannot be strong enough to override PRESERVECASE in Latvian. Therefore, these two principles alone cannot explain what happens in Latvian PPs. A third principle/constraint is needed in the grammar to assist STRUCCASE in overwriting the accusative/genitive case on plural DPs with the inherent dative.

I assume this to be a particular ranking of markedness in cumulative exponents in Latvian. Specifically, dative plural exponents are less marked than genitive and accusative ones. While this may seem like a stipulation which has no principled explanation whatsoever, I will show in Section 2.5 below how this pattern arose in the language historically. While the current markedness hierarchy is in a way accidental (if seen synchronically), it helped learners of Latvian resolve an interesting acquisition paradox at one point in the past.

Before I turn to the theoretical apparatus I will be using to implement my analysis, I will present informally how the system works:

- i. A Latvian preposition always assigns either the genitive or the accusative case to its complement;
- ii. Since these two cases canonically show up in structural positions, this creates a tension between STRUCCASE (which is violated if the assigned case surfaces faithfully) and PRESERVECASE (which is violated if the case features are altered at the PF interface);
- iii. If the DP happens to have the feature [PL], the entire construction additionally violates either *ACCPL or *GENPL and creates a profile so bad that a repair mechanism is invoked, which changes the case

features on the DP to the inherent dative, with the [DAT,PL] combination being more tolerable (see below);

- iv. Now that the DP is in the dative case, PRESERVECASE will be violated, but the overall profile of the whole construction including the position-neutral dative and a less marked number-and-case exponent is better than it would have been if the prepositional case had been preserved.

2.3 *The Harmonic Grammar framework*

Harmonic Grammar is a framework which, with the seminal work by Legendre et al. (1990), was in a way a predecessor of classic OT (Prince & Smolensky 2004). Since classic OT relies solely on strict constraint rankings to evaluate sets of candidates, it naturally poses difficulties to capturing cumulative effects in grammar where individual marked configurations are not bad enough to incur a fatal violation and create a suboptimal constraint profile but do create such a profile if they occur simultaneously. One way to tackle this problem is to use local conjunction of constraints (see Moreton & Smolensky 2002).

Local conjunction is, however, considered by many to be an unnecessary addition to OT that makes the framework much too powerful (Pater 2009; 2016). In this case, Harmonic Grammar (HG) presents an elegant alternative. In HG, each constraint has a particular weight. The ranking of the constraints naturally corresponds to their relative weighting. A violation of a constraint deducts this constraint's weight from the overall harmony value (which is initially equal to zero in all candidates). The candidate with the lowest absolute harmony value wins the competition.

For illustrative purposes, I will now present a toy example of how HG works. Let's imagine that there is a process P in an imaginary language L which is protected by a faithfulness constraint C1 with the weight [w = 3]. Every time P takes place, it creates a marked configuration which is banned by the markedness constraint *C2 [w = 2]. In context A, P takes place without violating any further constraints, so faithfulness wins over markedness:

(22) *Basic faithfulness vs markedness tension I:*

	Inp: context A	C1 w = 3	*C2 w = 2	\mathcal{H}
a.	☞ P takes place		-1	-2
b.	P does not take place	-1		-3

In context B, the process P violates a further markedness constraint – *C3 [w = 1.5] – but it does not violate *C2:

(23) *Basic faithfulness vs markedness tension II:*

	Inp: context B	C1 w = 3	*C2 w = 2	*C3 w = 1.5	\mathcal{H}
a.	☞ P takes place			-1	-1.5
b.	P does not take place	-1			-3

In (22) and (23), classic OT would have yielded the same results since *C2 and *C3 are both ranked below C1. Consider, however, scenario C where the application of P violates both *C2 and *C3. In classic OT, candidate (a) would win again. In HG, the two constraints – *C2 and *C3 – both influence the harmony value. Together, they create a cumulative value of -3.5, which is crucially worse than that produced by candidate (b):

(24) *The ‘gang effect’ in HG:*

	Inp: context C	C1 w = 3	*C2 w = 2	*C3 w = 1.5	\mathcal{H}
a.	P takes place		-1	-1	-3.5
b.	☞ P does not take place	-1			-3

The only way to solve this in classic OT would be to impose a new constraint whose violation would be triggered if both *C2 and *C3 were violated simultaneously. This constraint would need to outrank C1 while C1 continued to outrank *C2 and *C3 individually:

(25) *Local conjunction of constraints:*

	Inp: context C	*C2 & *C3	C1	*C2	*C3
a.	P takes place	*!		*	*
b.	☞ P does not take place		*		

In this paper, I will further pursue the HG approach. In this framework, the cumulative effect are a natural consequence of the way grammar is designed. For a concrete HG example, consider the description of a cumulative effect observed in the syntax of some Slavic languages in [Murphy \(2017\)](#).

2.4 Latvian prepositional phrases in HG

Returning to Latvian prepositional phrases, the idea behind the current analysis is that there is an optimization mechanism which applies post-syntactically to the syntactic representation of the PP before inflectional morphemes are inserted into the respective terminals ([Halle & Marantz 1993](#)). Its task is to create a configuration for the insertion of the optimal case formative in a given context. In order to implement this mechanism, I assume the following constraints to be relevant for the phenomenon in question (these constraints are based directly on what I discussed in Section 2.2 above):

The constraints:

(26)	IDKAS	w = 2.0	the faithful constraint whose purpose is to ensure the preservation of case features at the syntax/PF interface
	STRACC	w = 1.5	penalizes non-structural accusatives
	STRGEN	w = 1.5	penalizes non-structural genitives
	*ACCPL	w = 1.5	penalizes the feature combination [ACC, PL]
	*GENPL	w = 1.5	... [GEN, PL]
	*DATPL	w = 0.5	... [DAT, PL]

There are no STRDAT and STRLOC constraints in the system since the dative and the locative are both assumed to always be inherent in Latvian. The constraint STRNOM is irrelevant for this study. The weights of the latter three constraints presuppose that the dative case is the most desirable case for plural DPs in Latvian. The diachronic process that resulted in the respec-

tive constraints being ranked in this particular manner will be addressed in Section 2.5 below.

One important thing needs to be mentioned regarding the constraints above: the structural case constraints – STRACC and STRGEN – are very syntactic in their nature, while the latter three deal with morphological outputs. The relevant question is: which grammatical module would allow for this kind of constraint interaction? My answer lies in the very nature of the morphological module: it is nothing other than the interface between narrow syntax and PF. During the early stages of Spell-Out (pre-linearization), syntactic structure is still visible and can be accessed by relevant constraints.

That being said, I am aware that some readers will still be uncomfortable with how STRACC and STRGEN work. Currently, they are able to scan the syntactic representation and see what the relevant DPs are c-commanded by. In order to make these constraints more post-syntactic and local, I have an alternative proposal. Suppose that DPs reflect their derivational history by receiving a diacritic from the head by which they were selected before being merged into the derivation. Thus, the internal argument of a verb will have the diacritic **V**. The external argument will be marked with **v**, the complement of a preposition with **P** etc. In post-syntax, the constraints STRACC and STRGEN may be reduced to constraints which demand that local diacritics on the relevant DPs have the values **V** (STRACC) and **D*/*N*/*Poss** (STRGEN) respectively.

A representative example of how the above constraints interact can be seen in the tableaux below. I will use the accusative preposition *ar* ‘with’, combined with the noun *koks* ‘tree’.

(27) *T1: Accusative preposition with a singular DP*

	Inp: P _{Acc} + DP[sg]	IDKAS	STRACC	STRGEN	*ACCPL	*GENPL	*DATPL	
	<i>ar kok-?</i>	2	1.5	1.5	1.5	1.5	0.5	\mathcal{H}
a.	☞ Acc <i>kok-u</i>		-1					-1.5
b.	Gen <i>kok-a</i>	-1		-1				-3.5
c.	Dat <i>kok-am</i>	-1						-2

(28) *T2: Accusative preposition with a plural DP*¹¹

	Inp: P _{Acc} + DP[pl] <i>ar kok-?</i>	IDKAS	STRACC	STRGEN	*ACCPL	*GENPL	*DATPL	\mathcal{H}
		2	1.5	1.5	1.5	1.5	0.5	\mathcal{H}
a.	Acc <i>kok-us</i>		-1		-1			-3
b.	Gen <i>kok-u</i>	-1		-1		-1		-5
c.	 Dat <i>kok-iem</i>	-1					-1	-2.5

In the example above, the preposition *lexically* assigns the accusative case to its complement. This case is canonically expected in other environments, as required by the constraint *STRACC, hence the violation in the respective columns of the tableaux (the DP bears the diacritic *P* instead of *V*). Having a lower weight than IDKAS, the constraint *STRACC is alone not strong enough to ensure the insertion of the dative case exponent in singular contexts. However, in the plural, there is a group of constraints against cumulative exponents realizing case and number simultaneously. Together with *STRACC, the markedness constraint *ACCPL creates a harmony value worse than that produced by violating IDKAS and *DATPL. Since the constraint *DATPL has a lower weight than the other two cumulative exponence constraints (the origin of this configuration will be addressed shortly), the candidate in the dative case wins.

Crucially, this happens specifically in the plural because the corresponding singular constraints either do not exist (if singularity is merely the absence of plurality which would mean that the singular case formatives realize case only) or all have the same weights.

When marking a direct object, the accusative case is in the expected configuration, as in *redzu kok-us* / **kok-iem* (*I see trees*), which means that STRACC is not violated and the *ACCPL constraint loses its ‘gang partner’. Thus, it cannot override IDKAS alone:

(29) *T3: Plural direct object*

	Inp: V + DP[pl] <i>redzu kok-?</i>	IDKAS	STRACC	STRGEN	*ACCPL	*GENPL	*DATPL	\mathcal{H}
		2	1.5	1.5	1.5	1.5	0.5	\mathcal{H}
a.	 Acc <i>kok-us</i>				-1			-1.5
b.	Gen <i>kok-u</i>	-1		-1		-1		-5
c.	Dat <i>kok-iem</i>	-1					-1	-2.5

¹¹ The reason the singular accusative form is not inserted here is because there another constraint in the system – PARSEPL – with a weight high enough to always ensure that plural features are properly reflected in the output.

The same situation arises when comparing DPs in the genitive following prepositions with those occurring within another DP. I am not including the tableaux here since they would look exactly like (27), (28) and (29).

An important question that remains unanswered is how the unusual ranking of the latter three constraints arose in the language. I suggest that the demotion of *DATPL relative to the other two constraints was the result of the *analogical leveling* of prepositional case that took place in the history of Latvian and is attributable to the loss of the instrumental case.

2.5 The demise of the instrumental and prepositional phrases

In this subsection, I argue that the main reason for the dative case to make its way into all plural DPs embedded under a preposition is the history of the instrumental case which previously existed quite robustly in the language (and still does exist in modern Lithuanian).

Below are presented the reconstructed instrumental forms of Common East Baltic nouns together with their evolution into the corresponding modern forms (the reconstructed forms are based on those in Stang 1966). The tables below include three cases only since the rest of the paradigm is irrelevant for our concerns.

(30) *The historic development of Latvian case paradigms:*

<i>Old Paradigm</i>	M		F	
	Sg	Pl	Sg	Pl
Dative (N)	*-ui	*-amus	*-āi	*-āmus
(dat. pronominal)	*-am	*-iemus		
Accusative	*-an	*-uons	*-ān	*-āns
Instrumental	*-uo	*-ais	*-ān	*-āmis

<i>Modern Paradigm</i>	M		F	
	Sg	Pl	Sg	Pl
Dative	-am	-iem	-ai	-ām
Accusative	-u	-us	-u	-as
Instrumental	-u	-iem	-u	-ām

After multiple phonological and analogical changes, the instrumental case no longer had dedicated forms in any of the inflectional classes in Early Modern Latvian. It remained a separate case by the virtue of systematically syncretizing with two different cases in the singular/plural: *InstrSg* = *AccSg*,

InstrPl = *DatPl*. Some of the prepositions in Old Latvian combined with the instrumental case, e.g. *ar* ‘with’. After the morphological changes mentioned above, the modern pattern emerged, where the preposition required a case identical with the accusative in the singular and with the dative in the plural:

	INSTR.SG = ACC.SG	INSTR.PL = DAT.PL
(31)	<i>ar</i> <i>bērn-u</i>	<i>bērn-iem</i>
	<i>ar</i> <i>meiten-i</i>	<i>meiten-ēm</i>

At the same time, the use of the bare instrumental (sans preposition) gradually declined:

(32)	<i>es ēdu rokām</i> » <i>es ēdu <u>ar</u> rokām</i> <i>‘I am eating with my hands.’</i>
------	--

The result of this process was basically a total elimination of instrumental forms from all non-prepositional contexts. With the instrumental case being virtually purged from the system, prepositions such as *ar* were re-analyzed as ones that take the accusative in the singular and the dative in the plural. This ‘opened the window’ for more prepositions to undergo a shift in the same direction. Originally, only those prepositions that took the accusative underwent this shift. Gradually, the pattern was also extended to those prepositions that originally combined with the genitive in both numbers (Holvoet 2010).¹² In the following paragraphs, I will explain how this process, driven seemingly by pure analogy, was implemented in the grammar of Latvian.

I begin by assuming that the original weights of the markedness constraints were all the same: $*AccPl = *GenPl = *DatPl = 0.5$.¹³ As the instrumental was gradually eliminated from the system, it was no longer identified as a separate case in the minds of young individuals acquiring the language based on the input coming from their environment (they no longer had any evidence for the instrumental being a full-fledged case used on argument or adjunct DPs sans preposition). The prepositions appearing with the instrumental case caused a certain degree of confusion since they were used with two different cases. Because few prepositions took

¹² Endzelīns (1906) mentions that some Latvian dialects had not completed this process by the early 1900’s and only used dative plurals with those prepositions that took accusative forms in the singular.

¹³ The specific numeric values may be different in reality. The ones used in this section have been chosen for illustrative purposes.

dative singulars, it was probably assumed by the speakers that these were accusative prepositions with a peculiarity displayed by plural DPs, rather than the other way around.

Because this pattern constituted an obvious conflict in need of a resolution, this caused a shift in the cognitive system by suggesting to the speakers that the dative case in the plural was less marked than the accusative. The implementation of this shift was the promotion of the *AccPl constraint: *AccPl, $w = 0.5 \rightarrow w = 1.5$.

The following tableau demonstrates the original system (before the decline of the instrumental) at work using the preposition *gar* ‘along / past’:

(33) *T4: The original system at work*

	Inp: P _{Acc} + DP[pl] <i>gar kok-?</i>	IDKAS	STRACC	STRGEN	*ACCPL	*GENPL	*DATPL	\mathcal{H}
		2	1.5	1.5	0.5	0.5	0.5	
a.	☞ Acc <i>kok-us</i>		-1		-1			-2
b.	Gen <i>kok-u</i>	-1		-1		-1		-4
c.	Dat <i>kok-iem</i>	-1					-1	-2.5

After the promotion of *AccPl, the system assumed the following shape:

(34) *T5: Acc prepositions with plurals*

	Inp: P _{Acc} + DP[pl] <i>gar kok-?</i>	IDKAS	STRACC	STRGEN	*ACCPL	*GENPL	*DATPL	\mathcal{H}
		2	1.5	1.5	1.5	0.5	0.5	
a.	Acc <i>kok-us</i>		-1		-1			-3
b.	Gen <i>kok-u</i>	-1		-1		-1		-4
c.	☞ Dat <i>kok-iem</i>	-1					-1	-2.5

(35) *T6: Acc prepositions with singulars*

	Inp: P _{Acc} + DP[sg] <i>gar kok-?</i>	IDKAS	STRACC	STRGEN	*ACCPL	*GENPL	*DATPL	\mathcal{H}
		2	1.5	1.5	1.5	0.5	0.5	
a.	☞ Acc <i>kok-u</i>		-1					-1.5
b.	Gen <i>kok-a</i>	-1		-1				-3.5
c.	Dat <i>kok-am</i>	-1						-2

Crucially, the *GENPL constraint remained unaffected during this initial phase of the prepositional case shift

(36) *T7: Unaffected genitive preposition in Early Modern Latvian, pre-1900*

	Inp: P _{Gen} + DP[pl] <i>no kok-?</i>	IDKAS	STRACC	STRGEN	*ACCPL	*GENPL	*DATPL	\mathcal{H}
		2	1.5	1.5	1.5	0.5	0.5	
a.	Acc <i>kok-us</i>	-1	-1		-1			-5
b.	☞ Gen <i>kok-u</i>			-1		-1		-2
c.	Dat <i>kok-iem</i>	-1					-1	-2.5

During the initial stages of the prepositional case shift, the system had the following shape:

(37) ar meiten-i Acc.Sg | bez meiten-es Gen.Sg
 ar meten-ēm Dat.Pl | bez meiten-u Gen.Pl

This is indeed what is attested in older Latvian texts (Endzelins 1906). While the switching to dative plurals with accusative prepositions was motivated by a conflict during the acquisition process, I believe that the second phase of the case shift (Gen.Pl → Dat.Pl) in prepositional phrases was due to pure analogy and thus more or less accidental.

2.6 The postpositions

A question that remains open is how to account for postpositions. Three of them invariably take the genitive case. Without going too deep into historic linguistics, I will simply propose a hypothesis that these postpositions are originally nominals (see, for instance, Smoczyński 2007 for the preposition *dėl* in Lithuanian) and retain some of their nominal properties (while being phonologically reduced and lacking their own inflections), among which is the structural genitive.

Thus, *tevis labad* ‘for the sake of you’ is originally a complex expression consisting of the following parts (my personal speculative reconstruction):

(38) ** Tev-is lab-a **dėl-im
 2SG-GEN good-GEN.SG part-DAT.SG
 Lit. ‘for the part of your good.’

I assume that the contracted form *labad* still behaves like a noun in terms of embedding a nominal complement.

	Class I	Class II
N	-s	-a
G	-a	-as
D	-am	-ai
A	-u	-u
L	-ā	-ā
N	-i	-as
G	-u	-u
D	-iem	-ām
A	-us	-as
L	-os	-ās

Table 3: Inflectional Paradigms in Modern Latvian.

2.7 Against Impoverishment

An simpler alternative to the analysis presented in this section would be the invocation of rules of Impoverishment (Halle & Marantz 1993; Müller 2005; Müller 2004) used in Distributed Morphology in order to derive patterns of syncretism.

This alternative analysis would have to be based on the assumption that both the accusative and the genitive cases are featurally more complex than the dative, with the dative features underlying both, for example:

- (39) Dat \leftrightarrow [A]
 Acc \leftrightarrow [A,B]
 Gen \leftrightarrow [A,(B),C]

The impoverishment rule would delete the features B and C in prepositional contexts on plural DPs:

- (40) B,C \rightarrow \emptyset / [_{PP} P [_{DP} _____ PL]]

The rule would correctly derive the data. However, I have a very strong objection to using Impoverishment in order to derive this particular pattern in Latvian: the dative case in Latvian is not featurally less complex than the other cases in question.

Table 3 shows two sample inflectional paradigms for the most common inflectional classes in Latvian. The dative case:

- is never syncretic with any other case forms (this also holds for all other inflectional classes);

- is always expounded by a formative with either two moras on the vowel or a coda nasal (or sometimes even both).

There is no rational DM analysis of the inflectional paradigms in Latvian that could easily justify making the dative case featurally less complex than the accusative/genitive. If nothing else, then at least Iconicity should play a role here (Müller 2005).

I therefore conclude that the case shift in Latvian PPs is not an instance of Impoverishment-driven syncretism.

2.8 *Against non-autonomous cases*

Another potentially viable alternative to the analysis presented in this paper is assuming that the instrumental case still exists in Latvian. Under this assumption, one could say that all the accusative prepositions in Latvian have shifted to assigning the instrumental case instead.

The instrumental case would then be restricted to being used only after prepositions. Furthermore, it would be fully syncretic with the accusative in the singular and the dative in the plural. This idea is, in fact, not irrational. In Slovene, for instance, the instrumental and the locative case are exclusively used with prepositions (Derbyshire 1993). However, even though they are partially syncretic with other case forms, the instrumental and the locative still have unique dedicated forms in at least some inflectional classes in Slovene (e.g. locative and instrumental plural in nearly all instances, as well as instrumental singular of masculine and neuter nouns). The existence of such unique forms makes postulating these cases much more justifiable than claiming an abstract instrumental in Latvian.

Even though bare dative plurals may still occasionally be used in Modern Latvian in instrumental contexts (a potential further argument in favor of the instrumental as a separate entity in Latvian), these constructions are becoming less and less productive with every passing year and are highly marked in daily usage (Holvoet 2010).

There is a further complication in Latvian making this alternative analysis even less attractive. We have previously seen that, in Modern Latvian, all prepositions assigning the genitive case to singular DPs now also assign the dative case in the plural. This would need to be accounted for by employing yet another non-autonomous case, again, syncretic with the genitive in the singular and with the dative in the plural. Not only is this ‘Instrumental 2’ (or, going even further, ‘Ablative’) very unattractive for the same reason as the instrumental discussed in the previous paragraph: additionally there is no diachronic evidence for such a case having ever existed in Latvian.

2.9 Section summary

This section has presented a HG account of the case distribution pattern found in Latvian prepositional phrases. I have shown how the phenomenon can be modeled in terms of being a cumulative morphological effect which arose in the system after the instrumental case had been eliminated, leaving behind a handful of prepositions with a non-canonical case-assignment pattern which, during an attempt made by the speakers of Latvian to fit them into the bigger picture, caused a shift in the entire set of prepositions.

In the next section, I will provide arguments for choosing a morphological approach rather than a syntactic one.

3 Against a syntactic account

I will reverse everything I have said above and depart from the null hypothesis assuming that Latvian prepositions assign different case values to their complement DPs in narrow syntax in response to these DPs' ϕ -feature values. In order to gain access to the ϕ -features of a DP, a preposition has to establish an Agree relation with its complement. Under the assumption that a P-head in UG (Universal Grammar) is capable of assigning case independently without receiving any of its complement's features in return (Adger 2003; Baker 2013), this Agree operation would need to be a separate step taking place before case assignment. One issue that arises immediately under this assumption is *why* a P-head would need ϕ -features in the first place. There is no evidence for it in Latvian, with the language belonging to the typologically most common language class with non-inflecting prepositions. Leaving this issue aside for now, I will now sketch out (informally) the tentative sequence of syntactic operations needed to achieve the desired result:

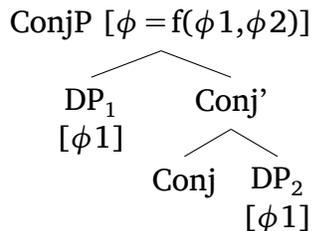
(41) P: Agree (ϕ) \rightarrow Assign Acc/Gen if # is [-pl]; otherwise Dat.

This simple mechanism (even though it is definitely an ad-hoc solution in its essence) is perfectly capable of capturing the data in the previous sections. A more interesting question is what happens when there is more than just a simple DP in a P-head's complement position. In particular, I consider the following two instances worthy of attention: (a) coordinated structures and (b) case-transferring constructions.

For coordinated constructions, I will assume the structure in (42), as argued for in Murphy & Puškar (To appear). I assume that the ϕ -features of the coordinated DPs are combined, and the resulting ϕ -complex is visible

at the top of the projection. According to [Murphy & Puškar](#), the number feature on ConjP is always going to be [+pl].

(42) *Syntax of coordinated structures:*



Case transferring is a concept going back to [Fanselow \(1990\)](#) (see also [Haider 2010](#), Ch. 7). A poster-child example of case transferring is German where a secondary predication must match the case of its antecedent. Consider the following two examples:

(43) *Case transferring in German (G. Müller, p.c.):*

- a. Ich frag-e dich als mein-en Freund.
 1SG.NOM ask-1SG 2SG.ACC as my-ACC.SG friend
 ‘I am asking you as my friend.’
- b. Sie red-en nicht mit Leut-e-n wie mir.
 3PL.NOM talk-3PL not with people-PL-DAT.PL like 1SG.DAT
 ‘They don’t talk to people like me.’

The DPs *meinen Freund* and *mir* must appear in the same case as their antecedents. Using the default nominative case would lead to ungrammaticality. Secondary predications of this kind are often introduced by elements like *as*, *such as*, or a pause (direct apposition). In these constructions, the two DPs act as one in terms of case assignment. With both of them having unvalued case features, they establish an agreement link and later receive case values from a higher head parallelly. Very much like German, Latvian happens to have case-transferring structures, as well:

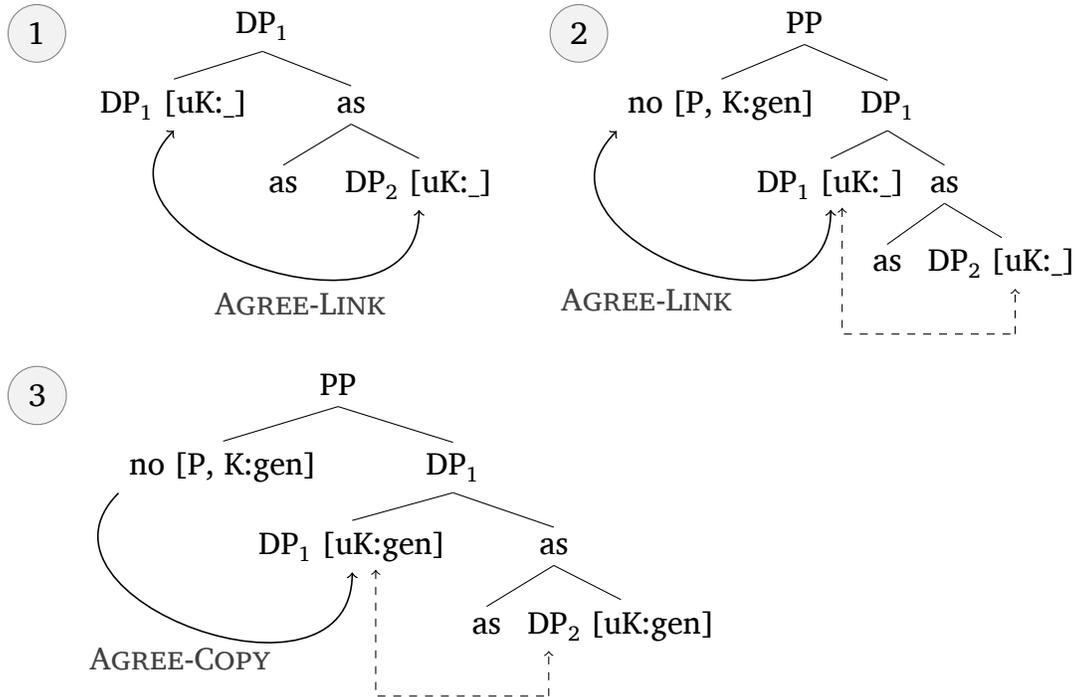
(44) *Case transferring in Latvian:*

- a. Dievin-u Dienvid-francij-u kā lielisk-u
 adore-1SG south-france-ACC.SG as great-ACC.SG
 viet-u atvaļinājum-am.
 place-ACC.SG vacation-DAT.SG
 ‘I love the South of France as a great place for a vacation.’

- b. Redz-u At-i, man-u lab-o
 see.PRS-1SG A-ACC.SG my-ACC.SG good-ACC.SG
 draug-u.
 friend-ACC.SG
 ‘I see Atis, my good friend.’

Crucially, the two DPs in the examples above must be in the same grammatical case. This holds for complex DPs in all syntactic positions. In the remaining part of this section, I will implicitly assume the syntactic derivation in (45) for case-transfer constructions (see Nevins 2014 and Pesetsky & Torrego 2007 for approaches to splitting feature matching and feature valuation into two different steps).

(45) *A general template for case-transfer structures:*



3.1 The analytic options

Before I turn to testing actual coordinated and case-transfer constructions, I would like to mention the predictions made by the proposed approach with prepositional agreement outlined in (41) above. Depending on the exact assumptions made about Agree, the following analytic options are possible:

i. **Option I.** Classic Agree (Chomsky 1999).

Under this assumption, the probe on the preposition – [$u\phi$:_] – probes once within its c-command domain and agrees with the closest DP. If the DP is singular, the entire complex will receive the accusative/genitive case. Otherwise, the entire structure will show up in the dative case. In case the preposition’s probe is also able to detect ϕ -features on ConjP (the top of the coordinated structure), one would expect coordinated structures to always appear in the dative following a preposition:

- (46) a. $P + [DP_{SG} (as) DP_{SG/PL}] \rightarrow Acc/Gen$
 b. $P + [DP_{PL} (as) DP_{SG/PL}] \rightarrow Dat$
 c. $P + [ConjP_{PL} DP_{SG/PL} \& DP_{SG/PL}] \rightarrow Dat$

ii. **Option II.** Relativized probing / searching for plural features.

This alternative relies on the ideas outlined in Preminger (2014). Instead of simply being a probe in need of features, one could have a probe pre-specified for particular feature values: $P [*find(pl)^*]$. If the probe remains unsatisfied, default valuation takes place. Such a probe will scan the entire c-command domain ignoring intervening goals which are not able to satisfy it. The result yielded by this kind of relativized probing is the following: the entire complex will be in the dative case if at least one DP in it has plural features. If both DPs are singular, the accusative/genitive will be assigned. If the probe is relativized to find singular features, then the entire complex will be in the accusative/genitive if at least one DP is singular, and in the dative otherwise. Again, if the probe can ‘read’ the ϕ -features on ConjP, then all coordinated structures will show up in the dative in case the probe is relativized to [+pl].

iii. **Option III.** Relativized probing with multiple case assignment.

In this approach, the relativized probe on P, e.g. $P [*find(pl)^*]$, will continue probing until it finds plural features or until the scanning of the c-command domain of the preposition has been completed. Every time the probe fails to find a matching goal, it assigns the accusative/genitive to the current goal. Once the probe has found a

plural DP, the probing stops and the remaining DPs uniformly receive the dative case:

- (47) $P + [DP_{SG} \rightarrow \text{Acc/Gen}, \dots DP_{SG} \rightarrow \text{Acc/Gen}, DP_{PL} \rightarrow \text{Dat}, DP_{SG/PL} \rightarrow \underline{\text{Dat}}, \dots]$

Again, for coordinated structures, one would expect the dative case only under the assumption that the probe finds the plural features on ConjP.

3.2 Analytic options VS data

With all these possible patterns in mind¹⁴, I would like to turn to the data provided by the consultants. The first dataset containing coordinated constructions is presented below.¹⁵

- (48) *Prepositional phrases with coordinated DPs:*
- a. Viņš iet ar puik-u un meiten-i.
he goes with boy-ACC.SG and girl-ACC.SG
‘He is walking with a boy and a girl.’ [SG & SG]
 - b. Viņš iet ar puik-ām un meiten-ēm.
he goes with boy-DAT.PL and girl-DAT.PL
‘He is walking with boys and girls.’ [PL & PL]
 - c. Māte gāja ar sav-u sun-i un saviem
mother went with own-ACC.SG dog-ACC.SG and own-DAT.PL
div-iem kaķ-iem.
two-DAT.PL cat-DAT.PL
‘Mother walked with her dog and two cats.’ [SG & PL]

¹⁴ Without a doubt, further analytical options are possible. For instance, one could have a system where the #-phrase acts as an intervener for prepositional agreement. In this case, the number phrase would have to be very high inside the DP, which is not a very attractive option. Also, it is not clear why the number phrases should be an intervener in the first place. Another possible avenue is pursuing a nano-syntactic approach resembling that of case-peeling (Caha 2007). The case-peeling approach would be: (a) less grounded in semantics than it is in the case of Slavic languages; (b) the number projection would, once again, have to be placed very high within the DP (above case) in order to be able to interfere with this process. There are other (less significant) issues with nano-syntactic approaches, which I will not be describing in detail due to the limited volume of this paper.

¹⁵ In order to save space, the glosses in the examples below have been somewhat reduced.

- d. Nora bija vispar viena, bez sav-iem bērniem
 N was all alone without own-DAT.PL child-DAT.PL
 un sav-a vīr-a.
 and own-GEN.SG husband-GEN.SG
 ‘Nora was all alone, without her children and husband.’
 [PL & SG]

In the examples in (48), two prepositions are used: *ar* ‘with’ governing the accusative case and *bez* ‘without’ requiring a complement in the genitive. In both cases, however, a plural complement shows up in the dative. In case the complement is coordinated and consists of one singular and one plural DP, there is a case mismatch, as seen in (48-c) and (48-d).

This result is unexpected. If we turn to the agreement options presented above, they all fail to account for the latter two examples. **Option I** predicts (48-c) to have two accusatives and (48-d) to show up with two datives. If ConjP is a legitimate goal for agreement, then both sentences would have two datives. If we pursue **Option II** with the probe relativized to [+pl], then (48-c) and (48-d) would show up with two datives. If it’s relativized to [–pl], then (48-c) and (48-d) would have two accusatives. Finally, **Option III** predicts the following: with the probe relativized to [+pl], (48-c) would be predicted correctly, but (48-d) would show up with two datives, contrary to fact. With the probe relativized to [–pl], (48-c) would have two accusatives.

Moreover, Latvian can have coordinated structures with more than two conjuncts. In these cases, each DP acts as if it were the only DP in the preposition’s c-command domain. No matter how the number values alternate on the conjuncts, all singular DPs will be in the accusative/genitive and all plural ones in the dative.¹⁶

Since all three options predict unattested results, one might assume – as the simplest possible way out – the presence of a further copy of the preposition in front of each conjunct in coordinated structures, which is subsequently deleted at PF:¹⁷

- (49) ... ar savu suni un (ar) diviem kaķiem
 ‘... with her dog and (with) two cats’

¹⁶ This is an independent further argument against Option III.

¹⁷ In this case, the conjuncts would be PPs, not DPs.

In this configuration, each P-head agrees with its local DP and assigns it case independently. In the surface structure, the superfluous copies of the preposition are deleted.

This assumption involving the presence of a second copy of the preposition deleted at PF is, however, more difficult to maintain in case-transferring constructions presented in (51) below. While a second copy is easily insertable in (49) without changing the semantics of the sentence or making it ungrammatical, the second copy of the preposition does alter the meaning in the example below: it is no longer a given fact that the speaker is the subject's best friend.

(50) She is talking to me as to her best friend.

I therefore assume that the appositive structures in the examples below do not contain implicit prepositions. In other words, the main DP forms a complex DP with the secondary predication before the preposition even enters the derivation.

(51) *Prepositional phrases with appositive DPs:*

- a. Es gribu doties uz Rīg-u, sav-u mīlāk-o
I want to.go to R-ACC.SG own-ACC.SG favorite-ACC.SG
pilsēt-u.
city-ACC.SG
'I want to go to Riga, my favorite city.' [SG & SG]
- b. Gribēju izdarīt to ar viņ-iem kā man-iem
wanted to.do this with 3SG-DAT.PL as my-DAT.PL
labāk-ajiem draug-iem.
best-DAT.PL friend-DAT.PL
'I wanted to do it with them as my best friends.' [PL & PL]
- c. Iemācījos to no man-as komand-as kā vienīg-ajiem
learned this from my-GEN.SG team-GEN.SG as only-DAT.PL
cilvēk-iem, kur-i mani saprot.
human-DAT.PL REL-NOM.PL me.ACC understand.PRS.3
'I learned this from my team as the only people who understand me.' [SG & PL]
- d. Viņa atgriežas no Cēs-īm, sav-as bērnīb-as
she returns from C-DAT.PL own-GEN.SG childhood-GEN.SG
pilsēt-as.
city-GEN.SG
'She is returning from Cēsis, her childhood's town.' [PL & SG]

The data in (51) perfectly match those in (48). Once again, the analytic options listed above fail to predict the correct distribution of case forms in Latvian PPs. One final way of accounting for the data in narrow syntax would be to postulate unlimited ‘cyclic’ Agree¹⁸ (P agrees with DPs in its c-command domain as long as there are DPs to agree with). During this process, the preposition would assign case independently to each nominal phrase. This idea is, of course, very unattractive in many ways. Unlimited probing is not something that’s commonly assumed in standard Minimalism. Also, one would have to get rid of Fanselow’s generalization about DPs in case-transfer structures receiving case in a joint manner.

3.3 Section summary

With all the arguments and evidence in mind, I would like to draw the following conclusions:

- Latvian prepositions do not agree in ϕ -features with their complement DPs (since there is no evidence for them ever bearing such features);
- They assign case only once and locally to the entire complement, and it is always either the accusative or the genitive (depending on the factors described in the first section);
- The dative case on plural DPs embedded in PPs is a surface phenomenon whose locus is entirely post-syntactic.

4 Conclusions

This paper’s goal was to tackle the non-trivial pattern of case assignment in Latvian prepositional phrases. While the generalization is very easy to formulate pre-theoretically, as in (52), it poses a significant challenge to all modern theories of case assignment.

(52) Latvian case generalization:

If a plural DP is licensed by a preposition, it shows up in the dative case regardless of which case the respective preposition assigns to singular DPs.

¹⁸ ... not necessarily in the same terms as Béjar & Rezac (2009) since, in their account, the probe does actually have a valid reason to agree more than once.

It is fairly easy to capture the phenomenon if we restrict the its scope to individual DPs embedded under a P-layer. One alternative is an agreement operation between the preposition and its complement. While it is not entirely clear why a preposition might need ϕ -features, it may be assumed to ‘release’ case in exchange for the number feature value it receives from the DP. This hypothesis did, however, falter under a more close-up scrutiny: there were case mismatches in coordinated and appositive structures where the two DPs show up in different numbers, regardless of their linear order. The only way to salvage this analytic approach would have been to propose multiple probing by the preposition into all the DPs in its complement position. In addition to the rather odd assumption that a non-inflected element somehow needs ϕ -features in order to assign case, we would now lose the generalization that case is shared by the DPs within appositive and coordinated structures at least in narrow syntax.

With all this being said, I consider it important to look at the synchronic state of affairs through a diachronic lens in this particular case. The development of the pattern in focus has been traced back in history, and its roots are well-known. The elimination of the instrumental case from the system (primarily for phonological reasons) created a pattern where some prepositions ended up taking the accusative case in the singular and the dative case in the plural. Analogical leveling shifted the originally accusative prepositions into this pattern, and subsequently also the genitive prepositions, as well. Since the phenomenon does seem to take place in morphology (at the syntax-PF interface), I consider it reasonable that inherent case assigned lexically by a preposition may be re-written on a DP during a stage in which the structure produced by syntax is optimized before inserting phonological information into the terminals.

The assumptions made in my analysis rely on the fact that children acquiring Latvian during the transitional stages in which the instrumental case was gradually eliminated from the system faced conflicting input: prepositions that assigned the accusative case in the singular showed up with the dative in the plural. This seeming replacement of one plural case by the other resulted in the speakers inferring that the dative case in the plural was less marked than the accusative. Since the accusative case was inherent in PPs, a constraint requiring the accusative to show up only in its structural configurations reinforced the newly promoted constraint penalizing the use of the accusative in the plural, which resulted in a cumulative effect strong enough to replace inherent accusatives in the plural with datives. This caused a massive shift of accusative-governing prepositions into

the newly emerging pattern. A few centuries later, genitive prepositions were moved into the same pattern by analogy.

Abbreviations

1 = first person, 2 = second person, 3 = third person, ACC = accusative, AUX = auxiliary, CONV = converb, DAT = dative, EP = epenthetic, F = feminine, GEN = genitive, IMP = imperative, INSTR = instrumental, LOC = locative, M = masculine, NMNLZ = nominalizer, NOM = nominative, NEG = negation, PASS = passive, PL = plural, PREV = preverb, PRS = present tense, PST = past tense, REL = relative, RFL = reflexive, SG = singular.

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Competing Interests

The author has no competing interests to declare.

References

- Adger, David. 2003. *Core syntax: A minimalist approach*. Oxford: Oxford University Press.
- Baker, Mark. 2015. *Case: Its principles and parameters*. Cambridge: Cam-bridge University Press.
- Baker, Mark C. 2013. On agreement and its relationship to case: Some generative ideas and results. *Lingua* 130. 14–32.

- Baker, Mark C. & Nadya Vinokurova. 2010. Two modalities of case assignment: Case in Sakha. *Natural Language & Linguistic Theory* 28(3). 593–642.
- Béjar, Susana & Milan Rezac. 2009. Cyclic Agree. *Linguistic Inquiry* 40(1). 35–73.
- Caha, Pavel. 2007. Case movement in PPs. In Monika Bašić, Marina Pancheva, Minjeong Son & Peter Svenonius (eds.), *Tromsø Working Papers on Language & Linguistics: Nordlyd 34.2, special issue on Space, Motion, and Result*, 239–299. Tromsø: CASTL.
- Chomsky, Noam. 1999. *Derivation by phase*, vol. 18. MIT, Department of Linguistics.
- Derbyshire, William W. 1993. *A Basic Reference Grammar of Slovene*. Columbus, Ohio: Slavica Publishers, Inc.
- Endzelīns, J. 1906. *Латышские предлоги. II Часть [Latvian prepositions. II Part]*. Юрьевъ, Типографія К. Маттисена.
- Endzelīns, J. 1923. *Lettische Grammatik*. Heidelberg: Carl Winter's Universitätsbuchhandlung.
- Fanselow, Gisbert. 1990. *Minimale Syntax*. Passau: dissertation.
- Haider, Hubert. 1985. The case of German. *Studies in German Grammar. Dordrecht: Foris* 65101. 65–102.
- Haider, Hubert. 2010. *The syntax of German*. Cambridge University Press.
- Halle, Moris & Alec Marantz. 1993. Distributed Morphology and the Pieces of Inflection. In Kenneth Hale & Samuel Jay Keyser (eds.), *The view from Building 20: Essays in Linguistics in Honor of Sylvian Bromberger*, 111–176. Cambridge, MA: The MIT Press.
- Holvoet, Axel. 2010. Between morphosyntax and the paradigm: Some puzzling patterns of case distribution in Baltic and their implications. *Acta Linguistica Hafniensia: International Journal of Linguistics* 42(2). 175–198.
- Koeneman, Olaf & Hedde Zeijlstra. 2017. *Introducing Syntax*. Cambridge: Cambridge University Press.
- Legendre, Géraldine, Yoshiro Miyata & Paul Smolensky. 1990. *Harmonic grammar: A formal multi-level connectionist theory of linguistic well-formedness: Theoretical foundations*. Citeseer.
- Marantz, Alec. 1991. Case and licensing. In *Escol '91: proceedings of the eighth eastern states conference on linguistics*. 234–253.
- McFadden, Thomas. 2004. *The position of morphological case in the derivation*. Philadelphia, PA: University of Pennsylvania dissertation.
- McFadden, Thomas. 2015. Capturing the structural/inherent distinction with a synthesis of competing theories of case. Talk at LinG Colloquium Series, Universität Göttingen, June 17th, 2015.

- Moreton, Elliott & Paul Smolensky. 2002. Typological Consequences of Local Constraint Conjunction. In L. Mikkelsen & C. Potts (eds.), *Proceedings of WCCFL 21*, 306–319. Cambridge, MA: Cascadilla Press.
- Müller, Gereon. 2004. A Distributed Morphology Approach to Syncretism in Russian Noun Inflection. In *Proceedings of FASL 12*, University of Ottawa.
- Müller, Gereon. 2005. Syncretism and iconicity in Icelandic noun declensions: A distributed morphology approach. *Yearbook of Morphology 2004* 229–271.
- Murphy, Andrew. 2017. *Cumulativity in Syntactic Derivations*. Leipzig: Universität Leipzig dissertation.
- Murphy, Andrew & Zorica Puškar. To appear. Closest Conjunct Agreement is an Illusion. *Natural Language and Linguistic Theory* .
- Nevins, Andrew. 2014. Agree-Link and Agree-Copy: two separate steps. Talk given at “Agreement 2014”, Recife.
- Pater, Joe. 2009. Weighted Constraints in Generative Linguistics. *Cognitive Science* 33. 999–1035.
- Pater, Joe. 2016. Universal Grammar with Weighted Constraints. In John McCarthy & Joe Pater (eds.), *Harmonic Grammar and Harmonic Serialism*, 1–46. London: Equinox.
- Pesetsky, David & Esther Torrego. 2007. The syntax of valuation and the interpretability of features. *Phrasal and clausal architecture: Syntactic derivation and interpretation* 262–294.
- Prauliņš, Dace. 2012. *Latvian. An essential grammar*. Routledge: Taylor & Francis Group.
- Preminger, Omer. 2014. *Agreement and its failures, volume 68 of linguistic inquiry monographs*. Cambridge, MA: MIT Press.
- Prince, Alan & Paul Smolensky. 2004. *Optimality Theory. Constraint Interaction in Generative Grammar*. Blackwell Publishing.
- Sigurðsson, Halldór Ármann. 1992. *The case of quirky subjects*. Department of Scandinavian Linguistics.
- Smoczyński, Wojciech. 2007. *Lietuvių kalbos etimologinis žodynas*. Edytor “Printer Polyglott”.
- Stang, Chr. S. 1966. *Vergleichende Grammatik der baltischen Sprachen*. Oslo-Bergen-Tromsø: Universitetsforlaget.