

Possessor case in Udmurt

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1 Introduction

Observation:

In Udmurt, the possessor can bear either genitive or ablative. The case values are in complementary distribution: according to the literature, genitive is the default possessor case; ablative occurs if the DP that contains the possessor functions as a direct object, cf. (1) (Csucs (1988); Kel'makov (1993); Vilkuna (1997); Winkler (2001); Nikolaeva (2002); Koptjevskaja-Tamm (2003); Suihkonen (2005); Edygarova (2009)).

(1) *Possessor cases in Udmurt:*

- a. so-len/*leš anaj-ez siče ug dišaški
he-GEN/ABL mother-3SG such dress NEG.PRES.3SG
'His mother does not dress such a way.' (Edygarova (2009, 105))
- b. so-leš/*-len eš-s-e ažžiško
he-ABL/GEN friend-3SG-ACC see.PRES.1SG
'I see his friend.' (Edygarova (2009, 101))

Similar case splits exist in other languages as well, e.g., Bezhta, a Daghestanian language. Here, the possessor receives the so-called *direct genitive* if the entire DP bears nominative case; otherwise, the possessor receives the so-called *oblique genitive*.

(2) Bezhta (Kibrik, 1995, 20):

- a. abo-s is
father-GEN_{dir} brother.NOM
'father's brother'
- b. abo-la is-t'i-l
father-GEN_{obl} brother-OBL-DAT
'to father's brother'
- c. is-t'i-la biLo-ʔ
brother-OBL-GEN_{obl} house-INCESS
'in the brother's house'

Problems and Questions:

- Assuming a cyclic syntax, the information that the DP is a direct object is not available at the point of case assignment in the DP. Therefore, the decision which possessor case is used requires look-ahead (or, alternatively, a non-local case dependency).
- Why is the alternative possessor case ablative and not some other case?

Claim:

The definition of “direct object” is not entirely clear. There are means to disambiguate the meaning of the term “direct object” and thus to find the correct generalization about the case split in Udmurt:

(3) *Empirical generalization:*

The possessor in Udmurt bears ablative if the DP in which the possessor is contained is assigned accusative. It bears genitive elsewhere.

Main idea of the analysis:

- Nominal elements in Udmurt bear two case slots.
- Possessors are always assigned genitive case in the DP, which fills one of the two case slots.
- The entire DP containing the possessor is assigned another case (nominative, accusative or a semantic case). This case ends up on the possessor as well (except if it is a semantic case). Thus, Udmurt has syntactic case stacking.
- Morphologically, only one case slot can be realized by a marker. Therefore, the two syntactic case slots are unified into one morphological case slot that is realized by the most specific matching marker. If a head bears genitive and accusative case, the most specific matching marker is the ablative marker, which is the default semantic case.

Consequences of this analysis (to be discussed below):

- Morphology as an autonomous module of the grammar
- A postsyntactic morphology enables a more natural analysis of the Udmurt pattern
- Locality of operations is given without locality restrictions
- Linguistic variation reduces to variation of morphological realization

Outline:

This paper ...

1. determines the exact distribution of the ablative case in order to find the correct generalization and the concrete meaning of the term “direct object”.
2. discusses a local analysis that derives the generalization.
3. discusses the consequences of this local analysis.

2 Empirical background

2.1 The Udmurt language

- Udmurt (alternate name: Votyak) is a Uralic language (Permian branch).
- Number of speakers: approx. 500,000
- It is spoken in the Udmurt Republic in Russia (west of the Ural mountains) and in parts of Kazakhstan.
- Almost all speakers are bi- or trilingual: apart from Udmurt they speak Russian and/or Tatar (Csucs, 1988).

2.2 The functions of the ablative

The ablative as a default case:

The ablative occurs in a vast variety of contexts. (Edygarova, 2009, 108) notes that “[the ablative] is used to express comparison, cause, from what material something is done [sic], or as a verb government etc.” (Note that the ablative can also be assigned by postpositions)

(4) Edygarova (2009, 108)

- vit'ton-leš uno
fifty-ABL more
'more than fifty'
- basma-leš lešt-em arberi-os
cloth-ABL make-PART thing-PL
'things which are made from cloth'
- so-leš žad'-em
he/she-ABL be tired-PRET2/3SG
'(he) got tired with him'

Additionally, the ablative can have the same function as the genitive: both case-mark possessors. Such a case split can be found in some other Uralic languages as well (although the factors conditioning the split are different from those found in Udmurt), e.g., Hungarian, Finnish, Estonian, Komi (cf. König & Haspelmath (1998); Nikolaeva (2002); see also Deal (to appear) about a similar alternation in Nez Perce). The alternation is best studied in Hungarian in which nominative and dative possessors alternate.

(5) *Two possessor cases in Hungarian* (Szabolsci, 1994):

- (a) Mari kalap-ja
(the) Mari.NOM hat-POSS.3SG
'Mari's hat'

- b. Mari-nak a kalap-ja
 Mari.DAT the hat-POSS.3SG
 ‘Mari’s hat’

Szabolcsi (1984); Szabolsci (1994) argues that the nominative and the dative possessor occupy different positions in the DP.

Evidence:

- The determiner $a(z)$ obligatorily follows the dative possessor but precedes the nominative possessor, see (5).
- Extraction asymmetries: Only the dative possessor can be extracted out of the DP.

(6) Possessor extraction in Hungarian (Szabolcsi, 1984):

- a. Mari-nak nem ismert-em [t' t nővér-é-t]
 Mari-DAT not knew-1SG sister-POSS.3SG-ACC
 ‘I never knew any sister of Mari.’
- b. *Mari nem ismert-em [t' t nővér-é-t]
 Mari.NOM not knew-1SG sister-POSS.3SG-ACC
 ‘I never knew any sister of Mari.’

- Wh-possessors must be in the dative and precede the determiner:

(7) Wh-possessors in Hungarian (Szabolsci, 1994):

- a. *ki kalap-ja
 who.NOM hat-POSS.3SG
 ‘whose hat?’
- b. ki-nek a t kalap-ja
 who-DAT the hat-POSS.3SG
 ‘whose hat?’

Conclusion:

The dative possessor is in a derived position that is the DP-counterpart of SpecC (i.e. an operator position that serves as an escape hatch for movement out the CP), namely SpecD. It is moved to this position from a position lower down in the structure that is associated with nominative case.

Is there also evidence for two different positions of genitive and ablative possessors in Udmurt? Answer: No.

- There is no element like the Hungarian determiner relative to which the two possessors align differently.

- There are no extraction asymmetries: Both the genitive and the ablative possessor can be extracted out of the DP.

(8) *Extraction of the genitive and ablative possessor in Udmurt*

- a. man'eryz sytše peres' Mikta-len
manner.3SG such old Mikta-GEN
'Such is old Mikta's style.' (Vilkuna, 1997, 224)
- b. valze jusky so-les'
horse.ACC.3SG unharness.IMP.2SG s/he.ABL
'Unharness his horse!' (Vilkuna, 1997, 224)

- In Udmurt, unlike Hungarian, there is no evidence from extraction, word order, and/or agreement that genitive and ablative possessors occupy different structural positions. Hence, we have no reason to assume that the case split arises from a difference in positions.

2.3 Finding the right generalization

If there is no asymmetry between the ablative and the genitive when used as a possessor, the question arises as to what is the correct generalization that predicts which case is used. Until now, the generalization says that a possessor gets ablative if the DP which contains the possessor is the “direct object”. However, the term “direct object” is ambiguous. There are basically three possible interpretations:

1. *Thematic role:*

The possessor gets ablative if the DP containing the possessor has the macro-role patient.

2. *Position in the tree:*

The possessor gets ablative if the DP containing the possessor is the sister of V.

3. *Case:*

The possessor gets ablative if the DP containing the possessor is assigned accusative case by a transitive verb.

These three interpretations are tested against the data.¹ In the end, only interpretation 3 will be compatible with the data.

Fact 1:

A possessor in a passivized subject receives genitive case. Assuming that passive does not change the thematic role of an argument, interpretation 1 is falsified by data such as (9).

¹We would like to thank Svetlana Edygarova (University of Helsinki) for providing us with the data.

(9) *Possessor case in active-passive alternation:*

- a. Petyr Masha-leš puny-z-e zhug-i-z
Peter Masha-ABL dog-3SG-ACC beat-1PST-3SG
'Peter beat Masha's dog.'
- b. Masha-len/*-leš puny-jez zhug-em-yn val
Masha-GEN/-ABL dog-3SG beat-PST-PART AUX.1PST
'Masha's dog was beaten.'

Fact 2:

A possessor in a passivized subject that is in the VP (is to the right of temporal adverbs that mark the VP boundary) receives genitive case. This falsifies interpretation 2, since it would predict ablative case instead of genitive case.

(10) *Adverb 'yesterday':*

- tolon Masha-len puny-jez zhug-em-yn val
yesterday Masha-GEN dog-3SG beat-PST-PART AUX.1PST
'Yesterday Masha's dog was beaten.'

Fact 3:

A possessor contained in a DP that bears a case different from accusative receives genitive case. The data in (1-a) has shown this for nominative case. (11) shows this for dative (a semantic case) and (16) for genitive case. This generalization falsifies interpretation 1 and 2.

(11) *Dative assigning verb:*

- Petyr [Masha-len suzer-ez-ly] akylt-e
Peter Masha-GEN sister-3SG-DAT bother-PRES.3SG
'Peter is bothering Masha's sister.'

Conclusion so far:

Only interpretation 3 is compatible with the empirical facts.

(12) *Empirical generalization:*

- The possessor in Udmurt bears ablative if the DP in which the possessor is contained is assigned accusative. It bears genitive elsewhere.

This generalization is also compatible with the following facts:

Fact 4:

The subject of the complement clause of an ECM verb receives accusative case. A possessor contained in such a subject receives ablative case. This falsifies interpretation

2 (and interpretation 1 if one assumes that ECM subjects only receive a thematic role from the embedded verb).

(13) *ECM construction in Udmurt:*

Petyr Masha-leš puny-z-e tyloburdo-os-ty kutyl-e malpa
Peter Masha-ABL dog-3SG-ACC bird-PL-ACC.PL catch-PRES.3SG think.PRES.SG
'Peter believes Masha's dog to catch birds.'

Another way to express ECM constructions in Udmurt is to nominalize the embedded clause. In these contexts, the subject of the embedded clause gets genitive case if the entire embedded clause receives nominative. The subject receives ablative case if the clause gets accusative case. That is, the same pattern as with possessor case emerges in nominalized clauses.

(14) Petyr-len Masha-leš pyny-z-e vi-em-ez myn-ym ug
Peter-GEN Masha-ABL dog-3SG-ACC kill-PARTC-3SG 1SG-DAT NEG.PRS.1
jara
please.CONG.SG
'[Peter's killing Masha's dog] does not please me.'

(15) mon Petyr-leš Masha-leš puny-z-e vi-em-z-e adzdz-i
1SG Peter-ABL Masha-ABL dog-3SG-ACC kill-PART-3SG-ACC see-1PAST.1SG
'I saw Peter killing Masha's dog.' (Lit. 'I saw Peter's killing Masha's dog.')

Fact 5:

A possessor of a possessor contained in a DP that bears accusative case receives genitive case (cf. Edygarova (2010, 177)).

(16) Masha-len apaj-ez-len puny-jez iz'-e
Masha-GEN sister-3SG-GEN dog-3SG sleep-PRS.3SG
'Masha's sister's dog is sleeping.'

(17) Petyr Masha-len apaj-ez-leš puny-z-e zhug-i-z
Peter Masha-GEN sister-3SG-ABL dog-3SG-ACC beat-1PRT-3SG
'Peter has beaten Masha's sister's dog.'

3 Deriving the generalization

The lexicon:

1. Udmurt exhibits a rich case system, see (18) (cf. Winkler (2001)). We assume that cases are decomposed into the binary features $[\pm\text{obl(ique)}]$ and $[\pm\text{obj(ect)}]$ (comparable to Bierwisch (1967)) as shown in (19) for the three structural cases nominative, accusative, genitive (see also Halle (1997) for a case decomposition that characterizes genitive as oblique and structural). All other cases (ablative, dative, locative, etc.) are semantic cases which consist of a structural case $[\text{+obl,+obj}]$ and further (perhaps semantic) features.

(18) *Case System in Udmurt*

Structural cases	Semantic cases	
nominative	dative	inessive
accusative	ablative	elative
genitive	caritive	illative
	adverbial	egressive
	instrumental	transitive
	approximative	terminative

(19) *Structural cases*

NOM	$[-\text{obl}, -\text{obj}]$
ACC	$[-\text{obl}, +\text{obj}]$
GEN	$[\text{+obl}, -\text{obj}]$

(20) *Semantic cases*

ABL	$[\text{+obl}, +\text{obj}][-\text{f}, -\text{g}, \dots]$
DAT	$[\text{+obl}, +\text{obj}][+\text{f}, -\text{g}, \dots]$
INSTR	$[\text{+obl}, +\text{obj}][-\text{f}, +\text{g}, \dots]$
...	

Note that the assumption that semantic cases are more complex than structural cases is not arbitrary, but can be seen from the fact that in various non-related languages, the markers of the semantic cases are built upon a structural case marker, exemplified by the paradigms in (21) (Arkadiev (2006)).

(21) a. *Case system of Romani*

	'pigeon'
Nom	golumbo
Acc	golumbo-s
Loc	golumbo-s-te
Dat	golumbo-s-ke
Abl	golumbo-s-tyr
Ins	golumbo-s-a

b. *Case system of Naukan Eskimo*

	'dog'
Nom	ayna-q
Erg/Gen	ayna-m
Ins	ayna-m-iŋ
All	ayna-m-un
Loc1	ayna-m-i
Loc2	ayna-kun

2. D heads in Udmurt have exactly two case slots.

(22) D[][]

Consequently, D heads can receive maximally two case values. This is reminiscent of case stacking. See section 5 for further discussion.

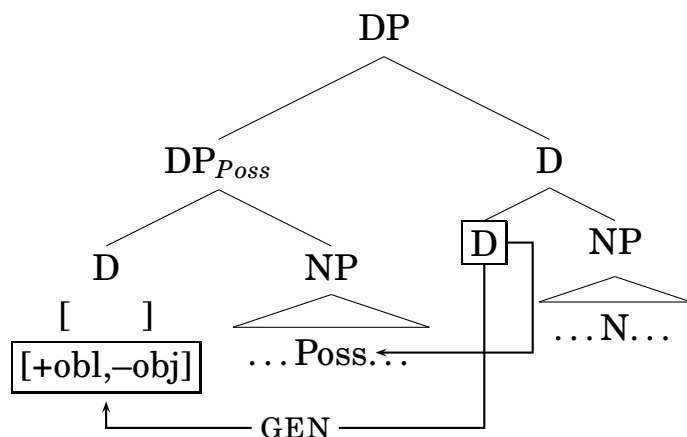
3. We assume that semantic cases are more complex than structural cases and that they fill two case slots rather than one like structural cases. This idea is reminiscent of other approaches that assume that there are two types of cases, one being more complex than the other (see Béjar & Massam (1999); Richards (2008)).

The syntax:

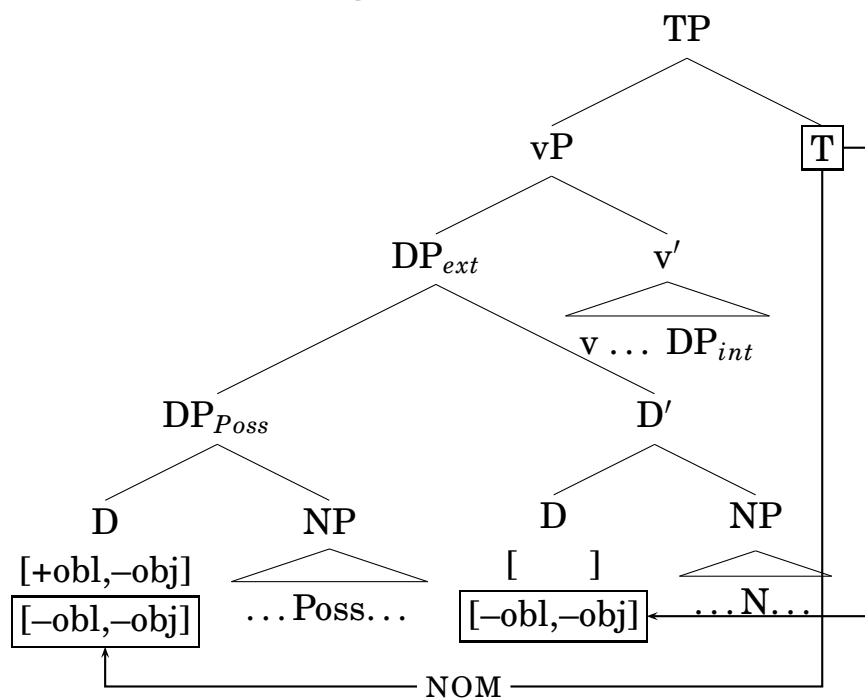
1. D assigns genitive case to a possessor in Spec-D, v assigns accusative case to the internal argument, and T assigns nominative case to the external argument.
2. In order to model case concord, we assume that case values are assigned to all case-bearing elements in the DPs via *Multiple Agree* (Hiraiwa (2001)). Case assignment will not affect items without case features.
3. The case assignment for structural and semantic cases is identical, i.e., both are assigned in the syntax. For sake of concreteness, we follow Hole (2008); Pytkänen (2002) and assume that semantic cases are assigned by zero adpositions.

Adopting these assumptions, case assignment in clauses with a possessor proceeds as follows:

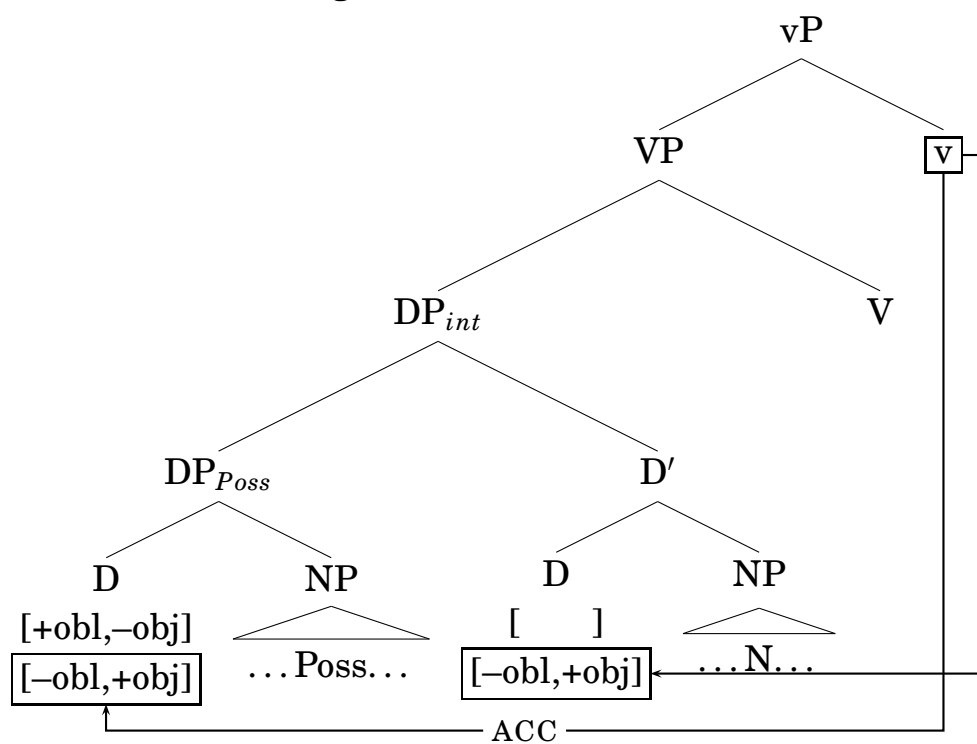
(23) *Genitive case assignment*



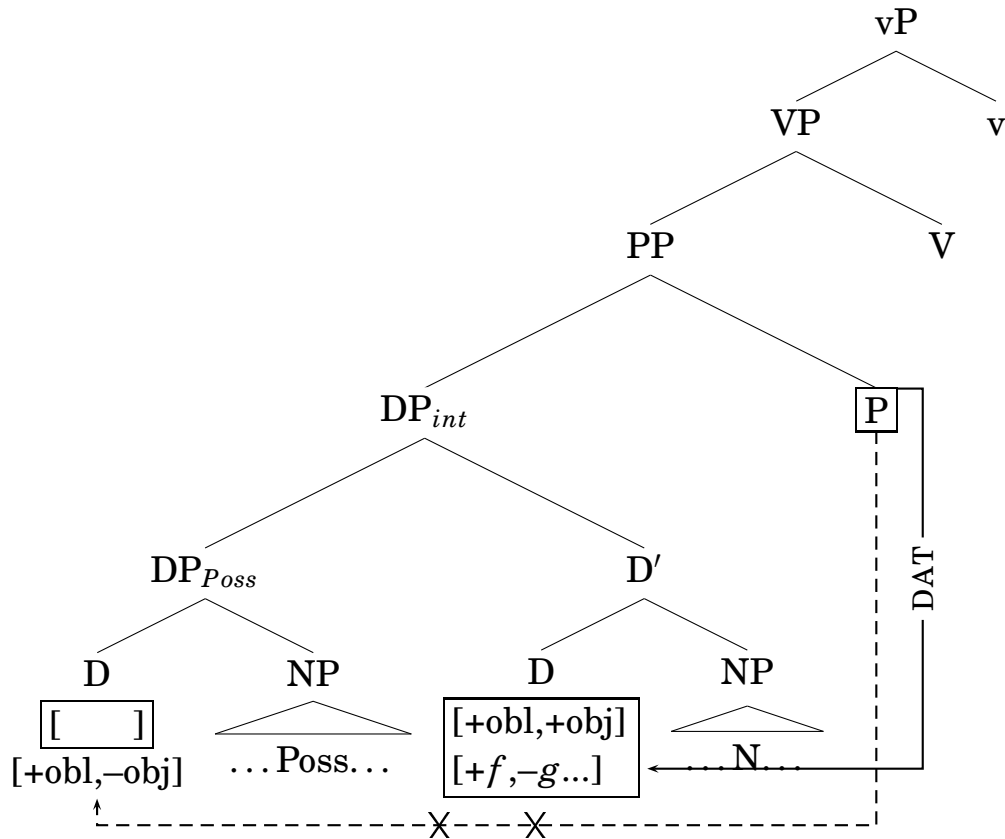
(24) *Nominative case assignment*



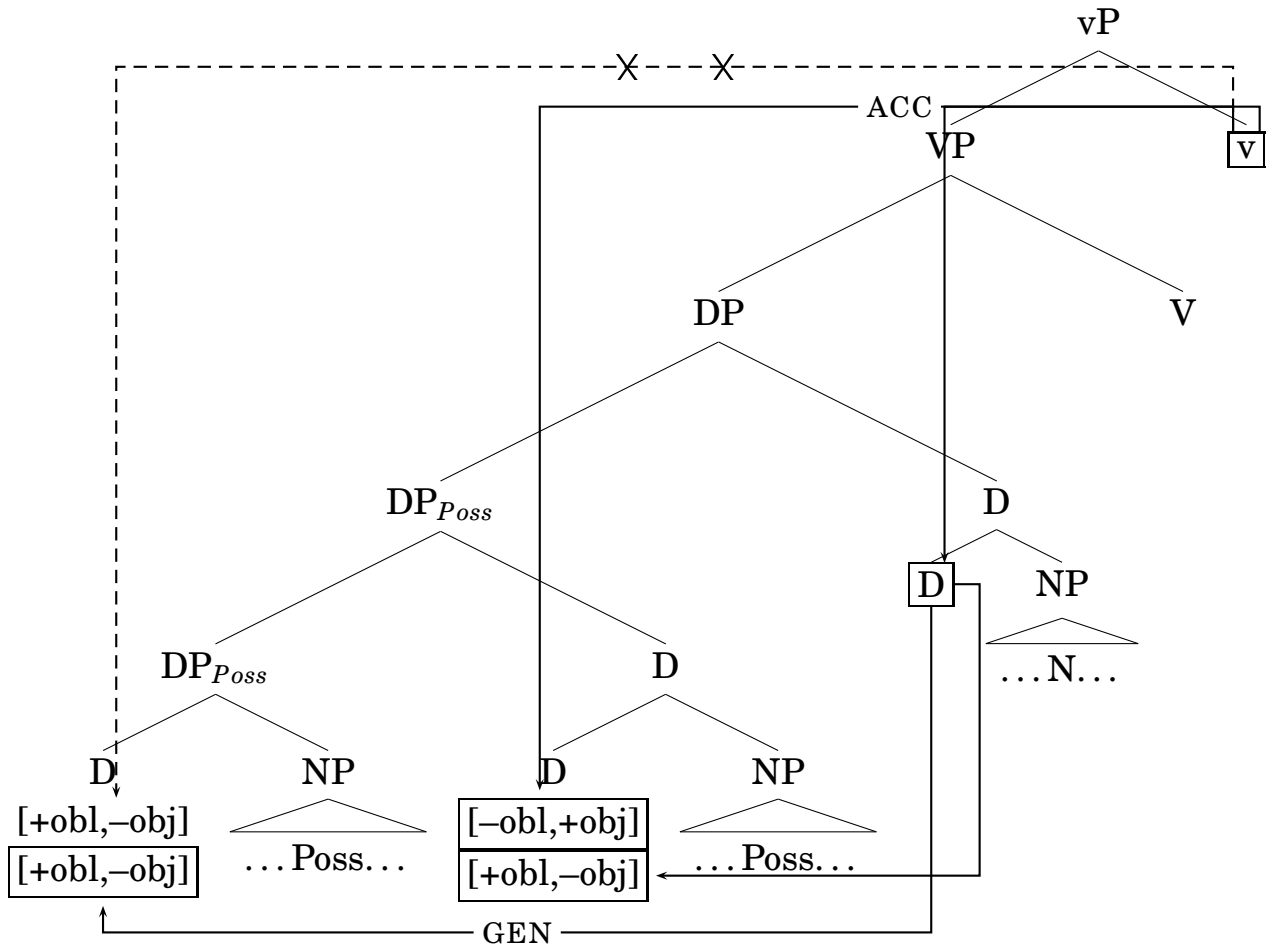
(25) *Accusative case assignment*



(26) *Dative case assignment*



(27) *Double Possessors: Genitive Case Assignment*



Morphology

- Udmurt has a filter which excludes the cooccurrence of two case markers.
- In order to obey the filter, the two case slots have to fuse into one. Fusion is a set-building operation which unifies the features of the two case slots into one.
- Since the nominative is the unmarked case and has only negative feature values, it will never have an impact on the realization of the genitive, see (28-a).
- The positive feature values of the accusative and the genitive case combine and create a new case value which is both [+obl] and [+obj]. Since the ablative marker is the most specific marker that matches this context, it must be inserted, see (28-b). (Note that no other semantic case marker can be inserted here because the markers are assumed to have additional features which are not present in the morpheme in (28-b).)
- Since any combination of a semantic case and the genitive is excluded already in the syntax, semantic cases do not change the case features. Thus, the features are realized as genitive case, see (28-c).
- Since fusion is a set-building operation, identical feature values, as in (28-d) with two genitive case features, are deleted.

(28)	a.	<i>gen+nom</i>				
		[+obl, -obj] + [-obl, -obj]	$\xrightarrow{\text{fusion}}$	[+obl, -obl, -obj]		(=genitive)
	b.	<i>gen+acc</i>				
		[+obl, -obj] + [-obl, +obj]	$\xrightarrow{\text{fusion}}$	[+obl, -obl, +obj]		(=ablative)
	c.	<i>gen+dat</i>				
		[+obl, -obj] + []	$\xrightarrow{\text{fusion}}$	[+obl, -obj]		(=genitive)
	d.	<i>gen+gen</i>				
		[+obl, -obj] + [+obl, -obj]	$\xrightarrow{\text{fusion}}$	[+obl, -obj]		(=genitive)
	e.	<i>nom+acc</i>				
		[-obl, -obj] + [-obl, +obj]	$\xrightarrow{\text{fusion}}$	[-obl, -obj, +obj]		(=accusative)

- Case values are realized postsyntactically by the most specific marker that matches the case values (*Subset Principle*; see Halle (1997)). The markers are given in (29).

(29)	[+obl+obj+g]	\leftrightarrow	<en>	(INSTR)
	[+obl+obj]	\leftrightarrow	<leš>	(ABL)
	[+obl]	\leftrightarrow	<len>	(GEN)
	[+obj]	\leftrightarrow	<e>	(ACC)
	[]	\leftrightarrow	<∅>	(NOM)

Note:

The analysis presented above naturally accounts for the case pattern with multiple possessors where only the highest possessor can receive ablative case. Lower possessors will receive genitive twice which leaves no slot left for the accusative case to be assigned, which in turn does not create a context where the ablative marker can be inserted.

4 Interim conclusion

In Udmurt, the possessor of a DP that bears accusative case receives ablative case instead of genitive case.

This phenomenon can be derived locally in terms of case stacking:

- DPs in Udmurt bear exactly two case slots. These case slots can be filled by structural (NOM, ACC, GEN) or semantic cases (ABL, DAT, INSTR, ...).
- A DP can receive case values until all of its case slots are filled. Structural cases fill one case slot, semantic cases fill two slots. Thus, it is possible that a DP can bear two structural cases, e.g., accusative and genitive case.
- Due to the feature specification of the markers in Udmurt and the way cases are decomposed, only the ablative marker can be inserted in case a DP has accusative and genitive case. In all other combinations of genitive and another structural case, only the genitive marker can be inserted.

⇒ The ablative case on possessors is not an abstract syntactic case, but realizes the combination of genitive and accusative case, which arises if the DP containing the possessor receives accusative case.

5 Discussion of the consequences

Morphology as an autonomous module of the grammar:

The syntactic and the morphological component are not completely identical. Rather, the morphology is a module of its own. Adopting the analysis of Udmurt above, this must be so for two reasons: (i) there is a mismatch of syntax and morphology concerning the number of case slots (the syntax allows for two case slots, but the morphology allows only for one); (ii) the morphological form does not necessarily represent the syntactic form: the ablative case marker can be inserted in a non-ablative context when it is the best match.

A postsyntactic morphology enables a more natural analysis of the Udmurt pattern:

Under a presyntactic morphology, the pattern does not derive naturally, but further stipulations are needed that the accusative case is in some way special.

Given a presyntactic morphology, the case features must be present on the lexical items before they are combined in the syntax. In the syntax, some sort of case checking must apply in order to guarantee that all cases are assigned correctly.

However, this leaves open why the following configuration is excluded where all cases are properly checked:

$$(30) \quad *[_{VP} [_{DP} Poss_{gen} \boxed{D}_{acc} NP] V \boxed{v}]$$

One possibility would be to let case checking apply between a case assigner and all elements in the case assignee. However, then the grammaticality of the following structure is unexpected:

$$(31) \quad [_{PP} [_{DP} Poss_{gen} \boxed{D}_{dat} NP] \boxed{P}]$$

To overcome this problem, the possibility for multiple case checking could be restricted to *v*. However, this is nothing but a formal restatement of the empirical generalization and does not derive it: accusative case checking/assignment, which involves *v*, is stipulated to be different from case checking/assignment of other cases, which involve different heads.

Locality of operations is given without locality restrictions:

In the analysis above, the case assigner can in principle be as far away from the case assignee as can be. However, since the number of case slots of a case assignee is limited and since the case slots are filled as soon as possible, the case assigners that are introduced later, i.e., which are farther away from the case assignee, cannot assign case anymore. Thus, the locality of case assignment is given even without locality constraints.

Linguistic variation reduces to variation of morphological realization:

In the analysis below, Udmurt is analyzed as having case stacking even though it does not exhibit overt case stacking. Thus, case stacking can be seen as a very widespread (maybe universal) phenomenon, but is sometimes disguised by the way morphology realizes case stacking.

In fact, in many other languages, similar phenomena have been treated as case stacking, which has been referred to traditionally as *Suffixaufnahme* (cf. Plank (1995); Kibrik (1995); Schweiger (1995); Moravcsik (1995)). Udmurt simply presents one of the four possible cases of case stacking (cf. Corbett (1995); Moravcsik (1995)):

- (32) *Parameter for the realization of several case values:*
- a. Realization of all cases (= case stacking): e.g., Huallaga Quechua
 - b. Realization of only one case:
 - (i) *Allomorphy* (new case):
Udmurt, Daghestanian languages; Moravcsik (1995, 462): “the two cases are represented by a single portmanteau morpheme.”
 - (ii) *Case attraction* (new case overwrites old case): e.g., Rithangu (Pama-Nyungan, Schweiger (1995, 354f.)), Ancient Greek.
 - (iii) *Case that is assigned first is realized:*
languages without case stacking that do not apply the allomorphy and the case attraction strategy, e.g., German.
 - (iv) *Phonological repair:*
In some languages, case stacking is possible, but if two stacked case morphemes on the possessor are phonologically identical, one of them is deleted, see, e.g., Jiwarli (Pama-Nyungan, Austin (1995)), Old Georgian (Kartvelian, Boeder (1995, 182)), Dyirbal (Pama-Nyungan, Schweiger (1995)) and Dench & Evans (1988) for further examples.

Note, however, that additional linguistic variation arises from lexical variation: in languages like Udmurt, the number of case slots on a case bearing item is limited to two, while other languages allow more than two case slots, e.g., Martuthunira (Pama-Nyungan, Corbett (2006, 135)).

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