

The structural nature of non-structural case: On passivization and case in Lithuanian

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Abstract. Dative case on indirect objects (IO) in Lithuanian is preserved under passivization, which is not the case with dative direct objects (DO) of monotransitive verbs, suggesting that the two datives are not alike. Although DAT-to-NOM conversion is taken as an indicator of structural case, we show that DO datives behave differently from DOs bearing structural accusative in that the former exhibit inherent case properties as well (see also Anderson 2015). We develop an account for the contrast between the two datives by using two types of derivational mechanisms: structure-building features, triggering Merge, and probe features, triggering Agree (Heck & Müller 2007; Müller 2010). This study demonstrates that structural vs. non-structural conversion can be dependent on not only how case is assigned but also on the Voice system of a language (in line with Alexiadou et al. 2014). We argue that the DO dative in Lithuanian is in fact non-structural. Even though the result of DAT-to-NOM conversion is structural nominative case, the derivation is different from that of structural ACC-to-NOM conversion.

Keywords. dative case; Lithuanian; structural vs. non-structural case; passives

- **1. Introduction**. This paper investigates the nature of datives in Lithuanian that exhibit an ambiguous behavior between structural and non-structural case in passives. Particularly, we focus on datives of direct objects (DOs) and indirect objects (IOs). Ditransitive verbs like *duoti* 'give' take a dative IO as in the active sentence in (1a). The dative case of the IO does not advance to nominative under passivization (1b), and is instead retained (1c). In cases where the dative is preserved, the theme becomes nominative and shows agreement with the passive participle (1c). ²
- (1) a. Tėvas davė vaikui obuolį. father.NOM give.PST.3 child.**DAT** apple.ACC 'The father gave the child an apple.'

Ditransitives

- b. * Vaikas buvo tėvo duo-t-as obuolį. child.NOM.M.SG be.PST.3 father.GEN give-PPP-NOM.M.SG apple.ACC 'The child was given an apple by the father.'
- c. Vaikui buvo tėvo duo-t-as obuolys. child.**DAT** be.PST.3 father.GEN give-PPP-NOM.M.SG apple.NOM.M.SG 'The child was given an apple by the father.'

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¹Ambrazas et al. (1997) report that the example in (1b) is grammatical. There seems to be variation involved between the speakers regarding DAT-NOM alternation with ditransitives. All of our consultants (8 out of 8) judge this alternation with ditransitives as ungrammatical.

²Passive participles in Lithuanian are marked either with a -t or -m suffix. -t stands for past passive participle, glossed here as PPP, and -m stands for present passive participle, glossed as PPRP.

In contrast, monotransitive verbs like *vadovauti* 'manage' allow the dative of DO to advance to nominative in passives, resulting in agreement with the passive participle. Note that it does not matter whether the direct object moves to subject position or stays in situ; the direct object in both (2b) and (2c) is in the nominative.³

(2) a. Janas vadovauja fabrikui/*fabriką.

Jonas.NOM manage.PRS.3 factory.DAT/factory.ACC

'Jonas manages the factory.'

Monotransitives

- Fabrikas yra Jono vadovauja-m-as.
 factory.NOM be.PRS.3 Jonas.GEN manage-PPRP-NOM.M.SG
 'The factory is being managed by Jonas.' (Anderson 2015:289–290)
- c. Jono yra vadovauja-m-as fabrikas.
 Jonas.GEN be.PRS.3 manage-PPRP-NOM.M.SG factory.**NOM**'By Jonas, the factory is being managed.'

The promotion of a theme to nominative case in passives has been taken as an indicator of structural case (e.g., Woolford 2006). In contrast, we take the inherent IO case in Lithuanian to be the type of case that does not advance to nominative and is not visible for A-movement (that is a type of case that in McGinnis' 2002 work is known as inert). Thus, the difference between datives of ditransitives (1) and monotransitives (2) suggests the presence of two different datives: inherent dative and what looks like structural dative. However, Anderson (2015) argues that Lithuanian DO datives that switch to nominative, thus like those in (2), pattern like structural case only in passives, but behave like non-structural case with respect to other tests.

These data thereby raise important questions. Can the dative in Lithuanian be structural in any sense? What defines structural and non-structural case, and how can we encode that difference syntactically (on the assumption that case is syntactic)? Investigating these questions is theoretically significant. It introduces a good testing ground for identifying the boundary between structural and non-structural case, and provides important insights for how Case Theory needs to be designed to explain the behavior of cases that show mixed properties.

Additionally, Lithuanian datives are typologically significant. Lithuanian falls outside the classification of languages in Alexiadou et al. (2014) presented in Table 1. Alexiadou et al. report that in passives crosslinguistically, (i) ditransitive IO datives alternate but monotransitive DO datives do not (e.g., as in German), (ii) both IO and monotransitive DO datives alternate (e.g., as in Ancient Greek), or (iii) datives generally never alternate (e.g., as in Icelandic). The grammar of Lithuanian speakers presented here introduces the fourth type: IO datives do not alternate, but some DO datives do. The four types are summarized in Table 1.⁴

We do not discuss such examples further in this paper as we focus on the DAT-to-NOM conversion of DOs. Importantly, such conversion with dative IO is ungrammatical for our consultants.

³The DO dative can also be preserved in the passive with the non-agreeing suffix -a on the participle as in (i).

⁽i) Fabrikui yra Jono vadovauja-m-a factory.DAT be.PRS.3 Jonas.GEN manage-PPRP-[-AGR] 'The factory is being managed by Jonas.'

⁴Note that not all monotransitive verbs with dative object show DAT-NOM alternation in Lithuanian passives. Particularly, predicates that take a beneficiary/maleficiary dative object like *pataikauti* 'be obsequious to someone', *nuolaidžiauti* 'to make concessions', *nusilenkti* 'bow' and *tarnauti* 'serve' do not as exemplified below. It could be

	Advances to NOM in passives					
	Standard	German,	Ancient Greek, Japanese,	Icelandic	Lithuanian	
	Dutch		Luxembourg German			
IO dative	✓	✓		*	*	
DO dative	*		\checkmark	*	✓	

Table 1: The behavior of datives in passives crosslinguistically

In this paper, we argue in line with Anderson (2015) by providing additional evidence that DO datives in (2) behave differently from DOs bearing structural accusative in that the former exhibit non-structural case properties as well. We develop an account for the contrast in (1)–(2), and the difference between DO dative case and structural accusative. While non-structural case is assigned syntactically through derivational features (probe or structure-building features; Heck & Müller 2007, Müller 2010), structural case is either assigned through derivational features or determined at Spell-Out. Furthermore, as far DAT-to-NOM conversion in passives with DO datives is concerned, we propose that Voice_{PASS} cancels a previously established Agree relation between v_{DAT} and a direct object DP — dative is therefore not assigned and the DP's case is determined at Spell-Out. This analysis of Lithuanian passives is in line with Icelandic anticausative and middle -*st*-verbs (e.g., Wood 2015) which also show DAT-to-NOM conversion with DO datives only — suggesting that oblique vs. structural case conversion can be dependent on the Voice system of a language (as suggested in Alexiadou et al. 2014).

The paper is organized as follows. Section 2 investigates the nature of the two datives by looking at their behavior in passives. We show that when the dative IO is passivized, it surfaces as a topicalized inherent dative, whereas the dative DO of monotransitives emerges as a nominative grammatical subject and shows what looks like a behavior of structural case. In Section 3, we provide additional tests to distinguish between structural and non-structural case and demonstrate that DO dative of monotransitives patterns like a non-structural case in all environments but passives. Section 4 presents our analysis and Section 5 concludes.

2. Passives in Lithuanian. In order to understand the nature of the datives of DO and IO, we analyze their behavior in passive constructions in this section. The comparison between the two types of datives reveals an important difference. DO datives convert to nominative under passivization whereas IO datives are preserved in the passive as shown in Section 2.2. Furthermore, we demonstrate in Sections 2.3 and 2.4 that the DO argument that advances to nominative becomes the subject of the passivized clause whereas the preserved IO dative does not move to subject position.

that this class of verbs takes IO dative and patterns with datives of ditransitives even though it lacks accusative DO. We leave this possibility for future research.

⁽i) a. Jonas tarnavo atėjūnams. b. * Atėjūnai buvo Jono tarnauja-m-i.

Jonas.NOM serve.PST.3 invaders.DAT

'Jonas served the invaders.'

'The invaders were served by Jonas.'

c. Atėjūnams buvo Jono tarnauja-m-a. invaders.DAT be.PST.3 Jonas.GEN serve-PPRP-[-AGR]
 'The invaders were served by Jonas.'

- 2.1 INHERENT VS. QUIRKY CASE. Before we compare DO and IO datives, a couple of remarks are in order. First, we adopt the assumption that inherent case is a type of case that is thematically licensed (Chomsky 1981, 1986) and it is syntactically inactive in the sense that it is not visible for A-movement (McGinnis' 2002 inert case). Second, we take quirky case to be the type of case that is syntactically active, eligible for A-movement. DPs with a quirky case behave like subjects in many ways, e.g., binding of subject-oriented anaphors, the ability to be PRO (see Zaenen et al. 1985 for Icelandic, Anagnostopoulou 1999 for Greek, Masullo 1993 for Spanish, i.a.). While neither inherent nor quirky case advances to nominative in passives, the two cases show different behavior as far as A-movement is concerned. Having introduced the main terms, we now turn to the main differences between the two datives in passives.
- 2.2 DAT-TO-NOM CASE CONVERSION. The first difference is the ability of the dative to convert to nominative in passives. When monotransitive verbs that assign dative to their object, like *vadovauti* 'manage', *padėti* 'help', *kenkti* 'harm' or *atstovauti* 'represent', are passivized, the DO converts to nominative case (DAT-to-NOM conversion). This is shown in (3), repeated from (2).
- (3) a. Janas vadovauja fabrikui/*fabriką.

 Jonas.NOM manage.PRS.3 factory.DAT/factory.ACC

 'Jonas manages the factory.'

 Monotransitives
 - Fabrikas yra Jono vadovauja-m-as.
 factory.NOM be.PRS.3 Jonas.GEN manage-PPRP-NOM.M.SG
 'The factory is being managed by Jonas.' (Anderson 2015:289-290)

In the passive of ditransitives, however, the dative on the IO is preserved.

(4) a. Tėvas davė vaikui obuolį. father.NOM give.PST.3 child.**DAT** apple.ACC 'The father gave the child an apple.'

Ditransitives

b. Vaikui buvo tėvo duo-t-as obuolys. child.**DAT** be.PST.3 father.GEN give-PPP-NOM.M.SG apple.NOM.M.SG 'The child was given an apple by the father.'

The passives in (3)–(4) indicate that DO and IO datives in Lithuanian are of different nature as we will further demonstrate below. We argue that the IO dative argument in the passive in (4b) does not move to subject position, i.e., it is not a quirky subject but a topicalized inherent dative IO (it has undergone A'-movement). The DO argument, in contrast, surfaces as a grammatical subject.

- 2.3 BINDING OF A 'SELF' ANAPHOR. The second difference comes from binding facts. In a transitive clause, a structural nominative subject is a controller of the subject-oriented anaphor *savo* 'self' and it cannot bind the non-reflexive pronoun *jo* 'his' (5a). On the other hand, the grammatical object must bind the non-reflexive form and it cannot be the antecedent of *savo* (5b).
- (5) a. **Domantas**_i rūšiavo tarnautojus pagal $*jo_i/savo_i$ įsitikinimus. D.NOM divide.PST.3 employees.ACC according *his.GEN/self.GEN beliefs 'Domantas divided employees according to his own beliefs.'
 - b. Domantas rūšiavo **tarnautojus**_i pagal **jų**_i/*savo_i įsitikinimus.

 D.NOM divide.PST.3 employees.ACC according their.GEN/self.GEN beliefs

 'Domantas divided employees according to their beliefs.' (Timberlake 1982:515)

In the canonical passive of a transitive, the accusative theme becomes nominative. The sentence-initial nominative theme now binds the reflexive subject-oriented anaphor *savo* suggesting that it has become a grammatical subject as exemplified in (6). In addition to that, the theme can also bind the non-reflexive form. The original binding relations of the theme (cf. 5b) have changed in the passive indicating that it has undergone A-movement to a SpecTP position.

(6) **Tarnautojai**_i yra rūšiuoja-m-i Domanto pagal employees.NOM.M.PL be.PRS.3 divide.-PPRP-NOM.M.PL Domantas.GEN according **savo**_i/**ju**_i įsitikinimus. self.GEN/their.GEN beliefs 'The employees_i are divided by Domantas according to their_i beliefs.' *A-movement*

The dative DO also surfaces as a grammatical subject in the passive showing the same behavior as the theme with structural case in the canonical passive in (6). In the transitive clause (7a), the dative DO binds the non-reflexive form. Under passivization, the dative DO advances to nominative and binds both the reflexive and the non-reflexive form (7b). This shows that the dative DO in the passive has become a grammatical subject and has undergone A-movement to SpecTP. Thus, the dative of monotransitives shows the behavior of structural case in passives.

- (7) a. Vaikas padėjo **tėvui** $_i$ *savo $_i$ /**jo** $_i$ namuose. child.NOM help.PST.3 father.DAT self.GEN/his.GEN house. 'The child helped the father $_i$ in his $_i$ house.'
 - b. $\mathbf{T\dot{e}vas}_i$ buvo vaiko padeda-m-as $\mathbf{savo}_i/\mathbf{jo}_i$ namuose. father.NOM.M.SG was child.GEN help-PPRP-NOM.M.SG self.GEN/his.GEN house 'The father; was being helped by the child in his; house.' A-movement

In contrast, IO datives show the opposite pattern. The non-reflexive form is being bound by the dative IO object in the active (8a). The initial dative IO retains its binding relations when passivized (8b). Thus, unlike the DO dative in (7), IO has not become a subject in the passive. Instead, it has undergone A'-movement to a projection above TP. This suggests that the IO dative is syntactically ineligible for A-movement and behaves like inherent case.

- (8) a. Tėvas davė **motinai** $_i$ vaiką **jos** $_i$ /*savo $_i$ namuose. father.NOM gave.PST.3 mother.DAT child.ACC her.GEN/self.GEN house 'The father gave the mother $_i$ the child in her $_i$ house.'
 - b. **Motinai**_i buvo duo-t-as vaikas **jos**_i/*savo_i namuose. mother.DAT was give-PPP-NOM.M.SG child.NOM.M.SG her.GEN/self.GEN house 'The mother_i was given the child in her_i house.' A'-movement

The dative of IO can be contrasted with a quirky dative subject. Lithuanian verbs like $tr\bar{u}kti$ 'lack', $u\bar{z}tekti$ 'have enough', stigti 'be short of', pakakti 'suffice', $reik\dot{e}ti$ 'need' take a dative subject and a genitive theme. The quirky subject binds both the subject-oriented reflexive and the non-reflexive form as in (9), and thus patterns like a subject under A-movement. The dative IO of ditransitives (8b) does not exhibit this type of binding relation, and thereby is not a quirky subject.

(9) **Jonui**_i trūksta pinigų **savo**_i/**jo**_i reikmėms. Jonas.DAT lack.PRS.3 money.GEN self.GEN/his.GEN needs 'Jonas lacks money for his own needs.'

Quirky Subject

- 2.4 ABILITY TO BE PRO. The third difference between DO datives and IO datives in Lithuanian is their ability to be PRO, a robust subjecthood test (e.g., Zaenen et al. 1985). Observe that PRO in to-infinitives can be a subject, as in (10a), but not an object, as in (10b).
- (10) a. Jonas_i norėjo [PRO_i apkabin-ti Mariją]. Jonas.NOM want.PST.3 hug-INF Marija.ACC 'Jonas wanted to hug Marija.'
 - b. * Jonas_i norėjo [(Marija) apkabin-ti PRO_i]. Jonas.NOM want.PST.3 Marija hug-INF Intended: 'Jonas wanted Marija to hug him.'

We use both subject and object control below to show that only DO datives and not IO datives can be PRO in passives of to-infinitives, suggesting that only the former can move to subject position.

- 2.4.1 SUBJECT CONTROL. Subject control verbs like *norėti* 'want' allow their to-infinitive complement to be passivized. The theme in a to-infinitive clause is PRO and therefore advances to subject as exemplified in (11). In subject control cases, the subject obligatorily transmits its nominative case to PRO, which otherwise bears dative case. PRO agrees with the passive participle, and the non-agreeing neuter passive participle is ungrammatical.
- (11) Jonas $_i$ norėjo [PRO $_i$ bū-ti apkabin-t-as/*abkabin-t-a Marijos]. Jonas.NOM want.PST.3 be-INF hug-PPP-NOM.M.SG/hug-PPP-[-AGR] Marija.GEN. 'Jonas wanted to be hugged by Marija.'

Monotransitive verbs like *help* that take a dative DO can be passivized in to-infinitive clauses as in (12). The dative DO becomes PRO suggesting that it also surfaces as a subject. The DO becomes nominative as reflected by the agreement morphology of the passive participle. This type of behavior of DO dative is parallel to that of the theme bearing a structural case as in (11).

(12) Jonas $_i$ visada norėjo [PRO $_i$ bū-ti padeda-m-as motinos]. Jonas.NOM always want.PST.3 be-INF help-PPRT-NOM.M.SG mother.GEN 'Jonas always wanted to be helped by the mother.'

The IO cannot become a PRO under passivization of a ditransitive to-infinitive clause as in (13). This suggests that IO does not become a nominative subject in the passive of to-infinitives.

- (13) * Tėvas $_i$ norėjo [PRO $_i$ bū-ti duo-t-as vaiką motinos]. Father.NOM want.PST.3 be-INF give-PPP-NOM.M.SG child.ACC mother.GEN 'The father wanted to be given the child by the mother.'
- 2.4.2 OBJECT CONTROL. The same contrast can be observed in object control cases. A passivized to-infinitive clause can be embedded under object-control predicates like *leisti* 'allow'. The theme in a to-infinitive becomes PRO and it is being controlled by the matrix dative object as in (14). The passive participle shows agreement with the dative case PRO.
- (14) Marija leido vaikui_i [PRO_i bū-ti apžiūri-m-am / Marija.NOM allow.PST.3 child.DAT be.INF check-PPRP-DAT.M.SG / *apžiūri-m-a gydytojo]. check-PPRP-[-AGR] doctor.GEN 'Marija allowed the child to be checked by the doctor.'

The dative DO of monotransitives surfaces as a PRO as indicated by the grammaticality of the passivized to-infinitive clause with the verb *help* in (15). Object control facts provide additional evidence that the dative DO advances to a subject position in the passive. Note that even though the dative DO does surface as a subject here, it does not advance to nominative as indicated by the verbal morphology of the passive participle, reflecting the case of PRO.

(15) Marija leido Jonui_i [PRO_i būti padeda-m-am tėvo].

Marija.NOM allow.PST.3 Jonas.DAT be-INF help-PPRP-DAT.M.SG father.GEN 'Marija allowed Jonas to be helped by the father.'

On the other hand, IO of dintransitives cannot be PRO in object control instances as in (16), suggesting that IO lacks properties of a subject.

- (16) * Tėvas leido Marijai_i [PRO_i būti duoda-m-ai vaiką motinos]. father.NOM allowed Marija.DAT be given-PPRP-DAT.F.SG child.ACC mother.GEN 'The father allowed Marija to be given the child by the mother.'
- 2.5 INTERIM SUMMARY. We provided three tests in this section showing clear differences between dative DOs and dative IOs in passives. The IO does not advance to nominative under passivization suggesting that it bears an inherent case. We showed that the dative IO does not behave like a dative quirky subject either since it cannot undergo A-movement to subject position. We take these facts as evidence that the dative of IO behaves like the inherent dative in passives that is not visible for A-movement. In contrast, the dative DO does advance to nominative, is able to surface as PRO and occupies the subject position in passives. These properties of the dative DO might be taken as evidence that this dative is structural case. However, in order to fully understand the nature of DO dative, we need to observe its behavior in other environments as well, which we discuss in the next section.
- **3. Structural vs. non-structural case**. The dative DO behaves like a structural case in passives, which predicts that it might show the behavior of structural case in other constructions. We investigate this possibility in detail in this section by comparing the properties of dative DO with the dative IO and accusative DO in various environments. Anderson (2015) argues that the DO dative behaves like inherent case with respect to all environments apart from passives. We revisit Anderson's diagnostics and add two tests in Sections 3.1 and 3.3 to distinguish between structural and non-structural case. We show that while the DO dative has a property of being structural case in passives, it also patterns like a non-structural case in other environments.
- 3.1 EVIDENTIALS. Lithuanian has evidential constructions like (17b), extensively discussed by Lavine (1999, 2006, 2010). The nominative subject of the active surfaces as a quirky genitive subject in the evidential and the accusative object turns into nominative (17a–17b).
- (17) a. Inga nuramino vaiką.
 Inga.NOM calmed.down.PST.3 child.ACC
 'Inga calmed the child down.'

Active

b. Ingos nuramin-t-a vaikas.
Inga.GEN calmed.down-PPP-[-AGR] child.NOM
'Inga must have calmed the child down.' (Lavine 2010:116)

Active Evidential

While objects with structural accusative case in the active alternate with the nominative in the evidential, dative objects do not. The dative DO and dative IO do not change to nominative as exemplified in (18). Both datives show different behavior from the structural accusative theme.

- (18) a. Ingos vadovau-t-a fabrikui/*fabrikas
 Inga.GEN manage-PPP-[-AGR] child.DAT/*child.NOM

 'Inga must have managed the child.'

 Monotransitives
 - b. Ingos duo-t-a vaikui/*vaikas knyga.

 Inga.GEN give-PPP-[-AGR] child.DAT/*child.NOM book.NOM

 'Inga must have given the child the book.'

 Ditransitives
- 3.2 PREPOSITION *po*. Another test comes from the preposition *po* 'each'. This distributive preposition allows an object with a structural case to surface as its complement as in (19). Note that the nominative object, namely the object of the evidential, can also be embedded under this preposition and it changes its case into accusative as in (20).
- (19) a. Jie suvalgė obuolį. b. Jie suvalgė po obuolį. they.NOM PRF.eat.PST.3 apple.ACC they.NOM PRF.eat.PST.3 each apple.ACC they ate an apple each.'

(Anderson 2015:305)

- (20) a. Ju suvalgy-t-a obuolys. they.GEN PRF.eat-PPP-[AGR] apple.NOM 'They must have eaten an apple.'
 - b. Jų suvalgy-t-a po obuolį/*obuolys. they.GEN PRF.eat-PPP-[AGR] each apple.ACC/apple.NOM 'They must have eaten an apple each.'

Anderson (2015) demonstrates that a DP with structural case can be embedded under this preposition whereas a DP with non-structural case cannot. Neither DO dative nor IO dative is compatible with this preposition and the accusative case is not available either as in (21). Even though we do not propose an analysis for Lithuanian *po*, this diagnostic shows a clear difference between datives and structural accusative case.

- (21) a. * Advokatai vadovavo po darbininkui/darbininką lawyers.NOM manage.PST.3 each worker.DAT/worker.ACC Intended: 'The lawyers managed one worker each.'
 - b. * Jonas davė po vaikui/vaiką obuolį.

 Jonas.NOM give.PST.3 each child.DAT/child.ACC apple.ACC
 Intended: 'Jonas gave each child an apple.'
- 3.3 NOMINATIVE OBJECTS IN TO-INFINITIVE CLAUSES. The third diagnostic comes from infinitival clauses with a nominative DP object. Lithuanian psych constructions with the dative experiencer allow the accusative theme of the to-infinitive clause to advance to nominative and emerge at the left edge of it as shown in (22).⁵ These constructions have been mainly discussed by Franks & Lavine (2006). They show that while accusative theme can advance to nominative, the theme with the non-structural case cannot.

⁵As noted by Franks & Lavine (2006), the constructions with the nominative in to-infinitive clauses are mostly used in East High Lithuania. Some speakers find (22) odd. Alternatively, those that do not accept (22) use something like (i) with a theme argument in accusative (VO order). See also Arkadiev (2014) for further discussion.

(22) Man nusibosta [laikraščiai skaity-ti].
me.DAT is.boring.[-AGR] newspapers.NOM read-INF

'It is boring for me to read newspapers.' (Franks & Lavine 2006:241)

If a verb in a to-infinitive clause takes a dative DO or dative IO such alternation is not possible. Both datives are retained and occur in situ as in the to-infinitive of psych verbs as in (23a–24a). When both datives are advanced to nominative and occur at the left edge of the infinitive, both instances become ungrammatical as in (23b–24b).

- (23) a. Man nusibosta [vadovau-ti žmonėms]. me.DAT is.boring.[-AGR] manage-INF people.DAT 'It is boring for me to manage people.'
 - b. * Man nusibosta [žmonės vadovau-ti]. me.DAT is.boring.[-AGR] people.NOM manage-INF
- (24) a. Man nusibosta [duo-ti vaikams knygas] me.DAT is.boring.[-AGR] give-INF children.DAT books.ACC 'It is boring for me to give children books.'
 - b. * Man nusibosta [vaikai duoti knygas] me.DAT is.boring.[-AGR] children.NOM give-INF books.ACC
- 3.4 NOMINALIZATIONS. The theme with a structural accusative case advances to a genitive case and is fronted in nominalizations as illustrated in (25). Anderson (2015) shows that while DPs with structural case switch to the genitive, DPs with inherent case do not.
- (25) a. rašky-ti obuolius b. obuolių raškymas pick-INF apples.ACC apples-GEN pick-NOM.SG.M 'to pick apples' (Anderson 2015:305)

The dative DO, unlike the accusative theme, retains its case and does not occupy the initial position in the nominalization in (26). When nominalizing the ditransitive 'give', the accusative object 'apple' advances to the genitive as expected as in (27). Nevertheless, the IO stays in situ and retains its case. Both datives behave the same in this respect.

- (26) a. vadovauti žmonėms b. vadovavimas žmonėms manage-INF people-DAT to manage people.' b. vadovavimas žmonėms manage-NOM.SG.M people.DAT 'managing people'
- (27) a. duoti obuolį vaikui b. obuolio davimas vaikui give-INF apple-ACC child.DAT 'to give a child an apple' 'giving of an apple to the child'

The initial genitive DP in nominalizations of 'manage' and 'give' can be interpreted as a possessor. As far as the nomionalizations of monotransitives is concerned, there seems to be a split between speakers. Most speakers interpret the initial genitive DP as a possessive whereas

⁽i) Man nusibosta [skaity-ti laikraštį]. me.DAR is.boring.[-AGR] read-INF newspaper.ACC 'It is boring for me to read newspapers.'

some speakers also allow this DP to be interpreted as a theme argument as indicated in (28a).⁶ Nevertheless, the contrast in ditransitives is robust. The genitive DP 'child' can be interpreted either as a possessor of an apple or the agent of giving; the goal reading is not available (28b).

- (28) a. žmonių vadovavimas people.GEN manage-NOM.SG.M
 - (i) 'people's management ' (ii) % 'management of people'
 - b. vaiko obuolio davimas child.GEN apple.GEN giving.NOM.SG.M
 - (i) 'child's giving of an apple' (agent); (ii) 'giving of a child's apple' (possessor); (iii)# the giving of an apple to the child (goal)
- 3.5 SUMMARY. Interestingly, DO datives behave like the inherent dative of IO with respect to all diagnostics⁷ discussed above, except for passives, where it behaves like structural case (note also the split between speakers mentioned above for nominalizations). This is summarized in Table 2.8

	ACC Theme	DO Datives	IO Datives
NOM case in passives	√	✓	*
NOM with evidentials	✓	*	*
ACC with preposition po	✓	*	*
NOM in to-infinitives	✓	*	*
Nominalizations	√	%	*

Table 2: Comparison of two types of datives and accusative theme

4. Analysis.

4.1 CASE VIA AGREE VS. MERGE. Following Heck & Müller (2007), Müller (2010), we take the derivation to be driven by two types of derivational features:

b.

- (i) a. vadovavimas priėmimo procesui b. management.NOM admissions.GEN process.DAT 'management of admissions process'
- (ii) a. atstovavimas savo interesams representation.NOM self.GEN interests.**DAT** 'the representation of self interests'

prièmimo proceso vadovavimas admissions.GEN process.GEN management.NOM 'management of admissions process'

savų interesų atstovavimas self.GEN interests.GEN representation.NOM 'the representation of one's own interests'

⁶Using online corpus (*tekstynas.lt*), we have found several instances where the dative object seems to advance to genitive. For example, while the dative DO can be retained in the nominalization as in (i-a) and (ii-a), it can also take genitive and be fronted as shown in (i-b) and (ii-b), which are taken from corpus. We leave the occurrence of this optionality for future research.

⁷Note that genitive of negation has also been used as a test to distinguish between structural vs. non-structural case in Anderson (2015). However, E.F. Sigurðsson & Šereikaitė (in progress) demonstrate that this test does not show a clear non-structural vs. structural case distinction since both non-structural case and structural nominative case (with some exceptions) cannot be overwritten by the genitive of negation.

⁸Dative patterning like a structural case in some environments, but like non-structural in others, has also been claimed to occur in Japanese causatives; see Harley (1995) and Sadakane & Koizumi (1995).

(29) Derivational features

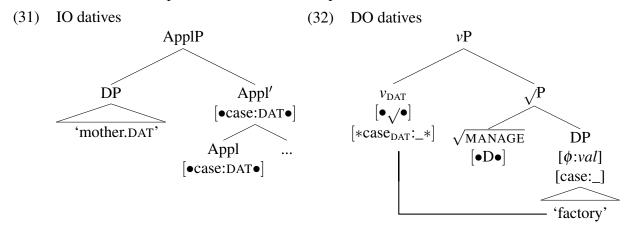
- a. Structure-building features [●F●] trigger Merge (and Move).
- b. Probe features [*F*] trigger Agree.

Using these derivational features, we propose the following for Lithuanian datives:

(30) Two types of non-structural case assignment

- a. IO datives involve a structure-building feature [•case:DAT•] on Appl (31) which discharges its dative case feature onto a DP in SpecApplP upon Merge.
- b. DO datives involve a probe feature [*case_{DAT}:_*] on v (32) an Agree relation is established between the dative case feature on v and a DP.

Structures corresponding to (30a) and (30b) are shown in (31) and (32), respectively. In (31), ignoring the complement of Appl, the structure-building feature on Appl requires its specifier to be filled; the element in its specifier position will be assigned dative upon Merge. v in (32), on the other hand, has a structure-building feature which says it must merge with a root (here $\sqrt{\text{MANAGE}}$). v also has a probe feature — when the case feature probes, Agree relation is established between v and the direct object DP. However, the case feature is not always calculated as dative, such as in the passive. This needs an explanation.

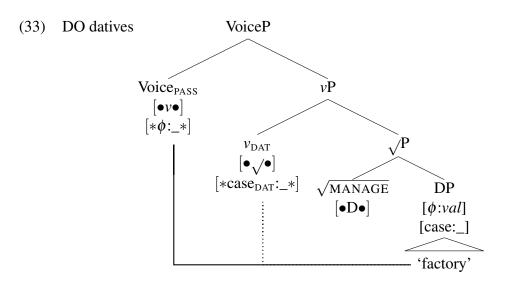


We argue that calculation of feature valuation and case assignment via Agree does not take place until Spell-Out. Feature valuation and case assignment via Merge takes effect immediately — its calculation does not wait until Spell-Out. Furthermore, if a DP does not bear a case by Spell-Out, it is assigned structural case, [STR], before it is sent to the interfaces. Syntax sees [STR] rather than nominative or accusative but at PF, [STR] is translated to either unmarked (nominative) or dependent (accusative) case. The result is that relations established through Merge cannot be deleted or cancelled (or overwritten) whereas relations through Agree can. For further discussion, see E.F. Sigurðsson (2017).

In (32) above, an Agree relation is established between v_{DAT} and the DP because of the probe feature on v. Dative case is nonetheless not realized on the DP in the passive. Recall that DAT-to-NOM conversion takes place in the passive of verbs like 'manage' whether or not the DP moves to subject position (see (2b) and (2c) above). This is important as this shows that the case conversion does not depend on movement to, e.g., SpecTP (unlike, e.g., Faroese, as discussed in

⁹This approach has some similarities to H.Á. Sigurðsson's (2012a, 2012b) case star deletion.

Section 4.2 below). We argue that the reason for DAT-to-NOM advancement in Lithuanian passives with DO datives is that the Agree relation established between v_{DAT} and the DP is deleted by a probe feature on a dedicated passive Voice head, Voice_{PASS}. This happens before case is calculated and therefore the DP has no case value at Spell-Out. Since the DP does not have a case value, its case feature will be calculated as structural case at Spell-Out.



We are now in a position to answer the question whether DO datives in Lithuanian are structural. We have seen that DO datives convert to nominative case in passives, which indicates structural case. On the other hand, we looked at various diagnostics in Section 3 that suggested a non-structural case.

We argue that the DO dative is, in fact, non-structural case. Even though the result of passivization is clearly the same for ACC-to-NOM conversion and DAT-to-NOM conversion, only accusative and nominative are structural cases. As discussed above, dative converts to nominative because Voice_{PASS} cancels a previously established Agree relation between v and a DP. In the passive of verbs that take structural accusative case objects in the active, no such process takes place; v does not have a case feature (at least not specified for a specific case, such as accusative) and therefore there is no established relation that Voice_{PASS} cancels or deletes in the course of the derivation.

4.2 AGREE RELATIONS CANCELLED IN OTHER LANGUAGES. We find the same type of pattern as in Lithuanian in Icelandic -st constructions; DO datives are not preserved with the Icelandic -st marker, which is a valency reducer used in, e.g., middles and anti-causatives whereas IO datives are preserved under -st (cf. H.Á. Sigurðsson 1989:270, 2012a:220; Thráinsson 2007:290–292). This is shown in (34c).

(34) *Icelandic*

- a. Þeir úthlutuðu okkur velli.they allocated us.DAT a.field.DAT'They allocated a field to us.'
- c. Okkur úthlutaðist völlur. us.DAT allocated-ST a.field.NOM 'We got allocated a field.'
- o. Okkur var úthlutað velli us.DAT was allocated a.field.DAT 'We were allocated a field.'

(adapted from E.F. Sigurðsson & Wood 2012:277)

(34a) shows the verb 'allocate' used in the active where it takes two dative objects. In the passive, both datives are preserved, as shown in (34b), whereas in the anticausative structure in (34c) only the IO dative is preserved; the direct object 'a field' is in the nominative. This shows that passive Voice in Icelandic does not cancel Agree relations but anticausative Voice does, on the other hand.

Faroese passives are also important with respect to deleted Agree relations, as shown in (35). In (35a) the verb 'help' is used in the active. It takes a *direct* dative object in Faroese (E.F. Sigurðsson 2018). In the passive structure in (35b) dative is preserved when the DP does not move but stays in situ. If the DP moves in the passive, as in (35c) it is realized in the nominative. In this case, there may be a higher structure-building feature, presumably on T, which deletes the Agree relation and this leads to nominative case. This is unlike Lithuanian where movement is not needed in the passive of DO datives for nominative to be realized.

(35) Faroese

- a. Teir hjálptu einum manni.
 b. Tað varð hjálpt einum manni.
 they.NOM helped a man.DAT EXPL was helped.DFLT a man.DAT
 'They helped a man.'
 'A man was helped.'
- c. Ein maður varð hjálptur.
 - a man.M.NOM.SG was helped.M.NOM.SG 'A man was helped.'

(E.F. Sigurðsson 2017)

It can also be added that IO datives in Faroese are in general preserved in the passive whether or not the DP moves to subject position (in examples like 'me.DAT was given a book'). That suggests that the structure-building feature on T can only delete Agree but not Merge relations.

4.3 WHY NOT A PP ANALYSIS? Alexiadou et al. (2014) propose that all datives are complements of P. PP is a phase and therefore the dative is not visible for the advancement to nominative. Nevertheless, in certain situations the complement can undergo A-movement, e.g., when P is incorporated into v (see also, e.g., Řezáč 2008 for a PP analysis).

We do not employ this analysis for the following reasons. First, no prepositions select for a dative complement in Lithuanian. Second, Lithuanian lacks pseudo-passives;¹⁰ the complement of the preposition cannot be advanced to nominative in the passive.

- (36) a. Šiandiena Jonas kalbėjo apie neseniai įvykusį skandalą. today Jonas.NOM talk.PST.3 about recently happened scandal.ACC 'Today Jonas talked about a recently emerged scandal.'
 - b. Šiandiena Jono buvo kalba-m-a apie neseniai įvykusį skandalą. today J.GEN be.PST.3 talk-PPRP-[-AGR] about recently happened scandal.ACC Lit.: 'Today, by Jonas, it was talked about a recently emerged scandal.'

¹⁰Anderson (2015) states that pseudo-passives in Lithuanian are possible and gives the examples in (i-a) and (i-b). However, note that the preposition is not realized in the passive; it is ungrammatical to include the preposition (i-c).

⁽i) a. Jis atsakė į klausimą. b. Klausimas buvo jo atsaky-t-as.
he.NOM answered to question.ACC
'He answered to the question'
'The question was answered by him.' (Anderson 2015:299)

c. * Klausimas $_i$ buvo jo atsaky-t-as $_i$ $_i$ t $_i$. question.NOM be.PST.3 he.GEN answered-PPRP-NOM to 'The question was answered by him.'

- c. * Šiandiena neseniai įvykęs skandalas $_i$ buvo kalbė-t-as apie t_i Jono. today recently happened scandal.NOM be.PST.3 talk-PPP-NOM about J.GEN 'Today, a recently emerged scandal was talked about by Jonas.'
- **5.** Conclusions. This paper looked at two types of datives in Lithuanian: direct object (DO) datives and indirect object (IO) datives. The former shows dative-to-nominative conversion in the passive. If we only look at the passive, this dative type seems to behave like structural case. However, other diagnostics that we looked at suggest it is non-structural.

Importantly, the two dative types are derived in two different ways. We suggested that the derivation of them both takes place in syntax. It is crucial for our approach that case via Agree is not calculated until Spell-Out, unlike case via Merge, and that Agree relations can be cancelled before Spell-Out.

We argued that the DO dative in Lithuanian is in fact non-structural. Even though the result of DAT-to-NOM conversion is structural nominative case, the derivation is different from that of structural ACC-to-NOM conversion. Voice_{PASS} cancels a previously established Agree relation between dative-assigning ν and the DP complement. No such process takes place in ACC-to-NOM conversion.

References

- Alexiadou, Artemis, Elena Anagnostopoulou & Christina Sevdali. 2014. Opaque and transparent datives, and how they behave in passives. *The Journal of Comparative Germanic Linguistics* 17(1):1–34. https://doi.org/10.1007/s10828-014-9064-8.
- Ambrazas, V., et al. 1997. The Lithuanian Grammar. Vilnius: Baltos Lankos.
- Anagnostopoulou, Elena. 1999. On experiencers. In Artemis Alexiadou, Geoffrey Horrocks & Melita Stavrou (eds.), *Studies in Greek syntax*, 67–93. Dordrecht: Kluwer.
- Anderson, Cori. 2015. Passivization and argument structure in Lithuanian. In Axel Holvoet & Nicole Nau (eds.), *Voice and argument structure in Baltic*, 289–322. Amsterdam: John Benjamins.
- Arkadiev, Peter. 2014. Case and word order in Lithuanian infinitival clauses revisited. In Axel Holvoet & Nicole Nau (eds.), *Grammatical relations and their non-canonical encoding in Baltic*, 43–95. Amsterdam: John Benjamins.
- Chomsky, Noam. 1981. Lectures on government and binding. Dordrecht: Foris.
- Chomsky, Noam. 1986. Knowledge of language: Its nature, origin, and use. New York: Praeger.
- Franks, Steven, & James E. Lavine. 2006. Case and word order in Lithuanian. *Journal of Linguistics* 42(2):239–288. https://doi.org/10.1017/S0022226706003896.
- Harley, Heidi. 1995. Subjects, events and licensing. Cambridge, MA: MIT dissertation.
- Heck, Fabian, & Gereon Müller. 2007. Extremely local optimization. In *Proceedings of WECOL* 26, 170–183. California State University.
- Lavine, James E. 1999. Subject properties and ergativity in North Russian and Lithuanian. In K. Dziwirek, H. Coats & C. Vakareliyska (eds.), *Formal approaches to Slavic linguistics*, 307–328. Ann Arbor: Michigan Slavic Publications.
- Lavine, James E. 2006. Is there a passive evidential strategy in Lithuanian? *Proceedings from the Annual Meeting of the Chicago Linguistic Society* 42(2), 41–55.
- Lavine, James E. 2010. Mood and a transitivity restriction in Lithuanian: The case of the inferential evidential. *Baltic Linguistics* 1:115–142.

- Masullo, Pascual J. 1993. Two types of quirky subjects: Spanish vs. Icelandic. *Proceedings of NELS 23*, 303–317.
- McGinnis, Martha. 2002. Locality and inert case. In Pius Tamanji & Kiyomi Kusumoto (eds.), *Proceedings of NELS* 28. GLSA Publications, University of Massachusetts, Amherst.
- Müller, Gereon. 2010. On deriving CED effects from the PIC. *Linguistic Inquiry* 41:35–82. https://doi.org/10.1162/ling.2010.41.1.35.
- Řezáč, Milan. 2008. Phi-agree and theta-related case. In Daniel Harbour, David Adger & Susana Béjar (eds.), *Phi theory: Phi-features across modules and interfaces*, 83–130. Oxford: Oxford University Press.
- Sadakane, Kumi, & Masatoshi Koizumi. 1995. On the nature of the "dative" particle *ni* in Japanese. *Linguistics* 33(1):5–33.
- Sigurðsson, Einar Freyr. 2017. Deriving case, agreement and Voice phenomena in syntax. Philadelphia, PA: University of Pennsylvania dissertation. http://ling.auf.net/lingbuzz/00363.
- Sigurðsson, Einar Freyr. 2018. Thanking indirect objects while helping direct objects: On the Definiteness Effect and case preservation in Faroese. Ms., University of Iceland.
- Sigurðsson, Einar Freyr, & Jim Wood. 2012. Case alternations in Icelandic 'get'-passives. *Nordic Journal of Linguistics* 35:269–312. https://doi.org/10.1017/S0332586513000048.
- Sigurðsson, Einar Freyr, & Milena Šereikaitė. In progress. The dual face of dependent case: On Lithuanian genitive of negation. Ms., University of Iceland and University of Pennsylvania.
- Sigurðsson, Halldór Ármann. 1989. *Verbal syntax and case in Icelandic. In a comparative GB approach*. Lund: Lund University dissertation. http://ling.auf.net/lingbuzz/002361.
- Sigurðsson, Halldór Ármann. 2012a. Minimalist C/case. *Linguistic Inquiry* 43:191–227. https://doi.org/10.1162/LING_a_00083
- Sigurðsson, Halldór Ármann. 2012b. Case variation: Viruses and star wars. *Nordic Journal of Linguistics* 35:313–342. https://doi.org/10.1017/S033258651300005X.
- Thráinsson, Höskuldur. 2007. The Syntax of Icelandic. Cambridge: Cambridge University Press. Timberlake, Alan. 1982. The Impersonal Passive in Lithuanian. *Proceedings of the eighth annual meeting of the Berkeley Linguistics Society*, 508–524. http://dx.doi.org/10.3765/bls.v8i0.2067.
- Wood, Jim. 2015. Icelandic morphosyntax and argument structure. Dordrecht: Springer.
- Woolford, Ellen. 2006. Lexical case, inherent case, and argument structure. *Linguistic Inquiry* 37:111–130. https://doi.org/10.1162/002438906775321175.
- Zaenen, Annie, Joan Maling & Höskuldur Thráinsson. 1985. Case and Grammatical Functions: The Icelandic Passive. *Natural Language and Linguistic Theory* 3:441–483.