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Case theory and case alternations: Evidence from Lithuanian[1]

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This article examines accusative-instrumental case alternations in Lithuanian, which is limited to four semantic classes of verbs: verbs of throwing, verbs of moving body parts, verbs of making sound and verbs of dressing/wearing clothing. Traditional grammars (e.g. Ambrazas 2006) have claimed that there is no semantic difference between the two cases in these contexts, but I will show that there is such a difference, albeit a subtle one. This allows us to understand why this alternation is possible: there is a difference in event structure, resulting in a different interpretation of the argument. When the argument is affected, or changed, accusative is used, and when it is peripheral to the event, the instrumental is used. This has implications for Case Theory, which aims to explain Case licensing in structural terms. I will argue that if a different morphological case is licensed, there is a difference in structure. By expanding the *v*P into multiple heads representing the subevents of a single event, we can reduce the accusative/instrumental alternation to a difference in structure.

Keywords: Case theory, instrumental case, event structure, case alternations

1. Introduction

Certain verbs in Lithuanian allow a case alternation between accusative and instrumental on the internal argument. Such case alternations are not unique to Lithuanian, though this one is unique in that the two cases involved seem to display no difference in meaning. There are three[2] semantic classes of verbs that allow this alternation, shown in

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[2] Verbs of throwing also allow this alternation, but generally the instrumental is only licensed when the verb is reflexive. I leave this class of verbs for future investigation.

(1): verbs of moving a body part, verbs of making sound, and verbs of dressing/wearing clothing (a–c, respectively).

(1) a. *traukyti* *pečius/pečiais*
to-shrug shoulders.ACC/INST

b. *žvanginti* *raktus/raktais*
to-jingle keys.ACC/INST

c. *avėti* *batus/batais*
to-wear shoes.ACC/INST

Many languages with rich overt morphological case systems have alternations in case forms, determined by syntactic structure or semantics. Structure-dependent case alternation is exemplified by the genitive of negation in Lithuanian, as in (2). Another type of case alternation is differential object marking, in which object NPs are marked with one case or another based on particular semantic features. This is shown in the accusative-genitive alternation in Ukrainian in (3).

(2) a. *Jis* *nupirko* *knygą*
he buy.PST book.ACC
'He bought the/a book.'

b. *Jis* *ne-nupirko* *knygos*
he NEG-buy.PST book.GEN
'He didn't buy the / a book.'

(3) *napysaty* *lyst/lysta* Ukrainian
to.write letter.ACC/GEN
'the write a/the letter'
(Richardson 2007, 46)

As the glosses in (1) show, the accusative and instrumental in this alternation have roughly equivalent meanings. My goal in this article is to tease apart the subtle differences in meaning between the two cases in (1), and show how the choice of case is related to the event structure of the sentence. Šukys (2005) notes that the accusative with such verbs is interpreted as an 'object', while the instrumental is interpreted as a 'means' for performing the action. Letuchiy (2007)[3] draws a similar

[3] Thanks to an anonymous reviewer for bringing this work to my attention.

conclusion for verbs of moving body parts in Russian, which also allow the accusative/instrumental alternation. He also points out, relying on distinctions from Levin & Rappaport Hovav (1995), that verb type plays a role: verbs of directed motion occur with the accusative, while verbs of manner of motion occur with the instrumental.

As Letuchiy notes, these case alternations in Russian and Lithuanian are related to differences in verb meaning—specifically, in argument structure and event structure. Similar argument structure alternations exist in other languages, and analyses of such phenomena will inform my analysis of the Lithuanian accusative/instrumental alternation. Dowty (1991) discusses several different types of alternations in argument selection, such as *spray/load*–type verbs, *hit*-type verbs, and *break*-type verbs. Crucial to his analysis are the notions of incremental theme and prototypical roles (in lieu of traditional thematic roles). These notions will also play a role in my analysis, even though the alternations under investigation here involve exclusively case and not argument selection.

In section 2 I will lay out the theoretical background for my analysis, outlining the relevant aspects of the frameworks of Dowty (1991) and Levin & Rappaport Hovav (1995), as well as the deconstructed verb phrase put forth in Ramchand (2008) to represent event structure syntactically. In sections 3–5, I present the case alternations in turn, describing the syntactic and semantic facts for each verb class, and show how the data can be accounted for by turning to event structure. While it is always accusative and instrumental that alternate, each semantic class of verbs shows a slight variation in how the two cases interact with the broader structure of the event, and in terms of argument structure.

2. Theoretical Background

2.1 Dowty 1991

In his seminal work on thematic relations and argument selection, Dowty proposes a solution to many issues with defining theta roles. Rather than sticking to discrete roles, such as Agent, Patient, Experiencer, etc., he proposes two proto-roles based on the prototypical features of the two primary arguments in two-place predicates: Proto-

Agent and Proto-Patient. These features are listed in (4) and (5), from Dowty (1991, 572).

(4) Contributing properties for the Agent Proto-Role:
   a. volitional involvement in event or state
   b. sentience (and/or perception)
   c. causing an event or change of state in another participant
   d. movement (relative to the position of another participant)
   (e. exists independently of the event named by the verb)

(5) Contributing properties for the Patient Proto-Role:
   a. undergoes a change of state (coming into or going out of existence)
   b. incremental theme
   c. causally affected by another participant in the event
   d. stationary relative to movement of another participant
   (e. does not exist independently of the event, or at all)

Dowty's Proto-Roles play a role in argument selection, as explained in his Argument Selection Principle (1991, 576):

> **Argument Selection Principle**: In predicates with grammatical subject and object, the argument for which the predicate entails the greatest number of Proto-Agent properties will be lexicalized as the subject of the predicate; the argument having the greatest number of Proto-Patient entailments will be lexicalized as the direct object.

In addition, he gives two corollaries: first, if two arguments have approximately the same number of properties for a proto-role, then either may be lexicalized as the subject (or object), and second, for verbs with three arguments, the direct object will be the argument with the most Proto-Patient properties and the other non-subject will be an oblique or PP. This second corollary is important in describing the argument selection properties of verbs with multiple possible argument configurations. Of particular interest in this article are verbs that allow for alternations between direct and oblique objects.

Within this class of verbs, Dowty establishes several subtypes. Relevant to the alternations under discussion are the alternating *spray/*

load types, nonalternating *fill/cover* types, and *hit* types, shown in (6)–(8) respectively (adapted from Dowty 1991).

(6) a. *We loaded the wagon with hay.*

b. *We loaded the hay onto the wagon.*

(7) a. *We filled the tank (with water).*

b. **We filled water (into the tank).*

c. *Water filled (*into) the tank.*

d. *The tank filled *(with) water.*

(8) a. *The boy hit the stick against the fence.*

b. *The boy hit the fence with the stick.*

For *spray/load*–type verbs, there is a difference in meaning between (a) and (b). In (6a), the wagon is completely filled, and in (6b), the total amount of hay is affected. Thus, for both alternations, the direct object is an incremental theme, and it is entailed that both non-subject arguments undergo a change of state: both the hay and the wagon are changed. As per the second corollary above, either argument can surface as the direct object.

Verbs like *fill* and *cover* have no alternation, as shown in (7a) and (7b). In (7c), the incremental theme is still the direct object (Dowty 1991, 593, fn 34). Because *water* is never the incremental theme, it can never be the direct object. The incremental theme can be the subject, as in (7d), but only if the verb is intransitive (*The tank filled*) or has a PP argument.

In the third class, the verb *hit* behaves somewhat like *spray/load*–type verbs, because both non-subject arguments are equally likely candidates for the Proto-Patient role. However, unlike in the first subclass, neither is an incremental theme, and thus the sentences in (8) are semantically equivalent, unlike those in (6). Furthermore, *hit* does not entail a change of state for either of the non-subject arguments, whereas a verb like *break* does:

(9) a. *The boy broke the fence with a stick.*

b. *The boy broke the stick against the fence.*

In both sentences in (9), the change of state is entailed for the direct object, but not for the oblique object.

Another relevant issue in determing incremental theme is whether motion as a change-of-state entailment counts as a Proto-Patient property. For verbs like *hit*, it is the prepositional argument that moves, not the direct object in (8b). Since neither non-subject argument undergoes a change of state, if motion were as important as this Proto-Patient property, it should follow that *hit* does not alternate. There are verbs with meaning similar to *hit* that do not alternate. Verbs like *smack, clobber, stone* only allow the instrumental to appear as a PP, whereas verbs like *dash, slam, throw* only allow the location to appear as a PP, as shown in (10) and (11), respectively (Dowty 1991, 596)

(10) a. *swat the boy with a stick*

b. **swat the stick at/against the boy*

(11) a. **dash the wall with water*

b. *dash the water against the wall*

The movement entailed by the verbs in (10) and (11) is different. In (11), there is an inherent change in location, but not in (10). Dowty suggests that movement may not be an important property of Proto-Patients, but change in location due to movement appears to play a role, accounting for the lack of argument structure alternation for these verbs. Verbs like *hit* are in between these non-alternating verbs. The alternation, according to Dowty, is based on a difference in the agent's intentions: the argument that the agent intends to affect is the more 'significant' one, and becomes the Proto-Patient.

As will be discussed below, the notion of Proto-Patient is relevant to the Lithuanian case alternations, as is the Argument Selection Principle. However, unlike the alternating verbs discussed in Dowty (1991), the Lithuanian verbs have only one non-subject argument. I will argue below (sections 3–6) that the accusative is used when the internal argument has more properties of a Proto-Patient (crucially, change of state and causal affectedness), and that the instrumental is used when these properties are absent.

2.2 Levin & Rappaport Hovav 1997

Levin & Rappaport Hovav (1997) examine another class of alternating verbs: the so-called 'variable behavior verbs', which behave sometimes like unergative verbs and sometimes like unaccusative verbs. In this particular work, they focus on monadic verbs of sound emission, such as *beep, buzz, creak, gurgle, jingle, ring, roar, rumble, screech, thud, tick, whistle*… (Levin & Rappaport Hovav 1997, 490). These verbs are intransitive, with the sole argument representing the emitter of the sound described by the verb. They are generally atelic, which should make them unergative. Such verbs also can assign accusative to non-subcategorized objects, as shown in (12).

(12) a. *The bell jangled its first summons.*

b. *She warbled her way through the song.*

However, many of these verbs take inanimate subjects, which are non-agentive, thus classifying them as unaccusative verbs.

To account for their variable behavior, Levin & Rappaport Hovav examine how these verbs interact with resultatives. Resultatives can be predicated of objects, as in (13a), or (surface) subjects of unaccusative verbs, as in (13b).

(13) a. *scrub the floors clean*

b. *the bottle broke open*

This makes for a clear test for unaccusativity and unergativity: if a resultative can be predicated of the subject of an intransitive verb, it must be unaccusative. And, in fact, there are verbs of sound emission that are determined to be unaccusative by this test.

Levin & Rappaport Hovav conclude that the variable behavior of verbs of sound emission reflects the fact that these verbs have two different meanings. One meaning is associated with unaccusativity, and the other with unergativity. The first meaning is seen when these verbs function as verbs of directed motion:

(14) *The elevator wheezed upward.*

The resultative, *upward* in (14), indicates the direction. Verbs of directed motion (as opposed to verbs of manner of motion) behave like

unaccusatives (e. g., they use auxiliary *essere* 'be' in Italian, a classic test of unaccusativity/unergativity). Further evidence for this hypothesis is the fact that non-directional resultatives are ungrammatical with these verbs, as in (15), unlike with other unaccusative verbs (see (13b) above).

(15) **The phone rang to death.*

Such resultatives are grammatical in the unergative pattern, with a nonsubcategorized object, as in (16):

(16) *The phone rang itself to death.*

Another compounding factor in accounting for this variable behavior is the difference between agentive and non-agentive subjects. Verbs of sound emission with agentive subjects generally cannot be used in the directed motion sense. The exception is verbs that express a concomitant sound, such as *clank* or *rustle*, as opposed to a sound produced under the control of the agentive subject (e. g., *shout*).

Verbs of sound emission are not the only verbs that can become verbs of directed motion. If accompanied by a directional resultative, verbs of manner of motion can also take on the meaning of directed motion. Furthermore, verbs of manner of motion show the same results for unaccusativity as non–directed-motion verbs of sound emission. Levin & Rappaport Hovav propose that the variable behavior of verbs of sound emission and manner of motion is due to a difference in their event structure. Crucially, their unaccusativity or unergativity depends on whether there is internal causation or external causation.

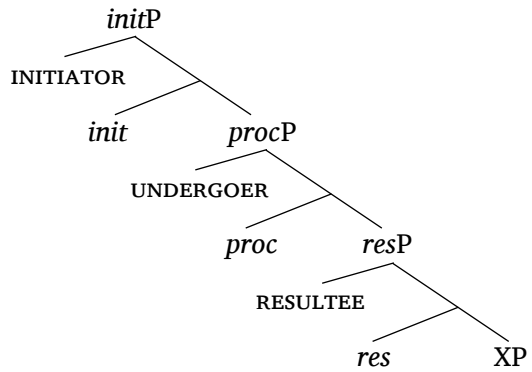
Typically, in monadic verbs, agentivity is associated with unergativity, and telicity is associated with unaccusativity. However, the inanimate verbs of sound emission are atelic and non-agentive, which is inconclusive for classifying them as either unergative or unaccusative. However, looking at the type of causation does offer some clarity. In intransitive verbs that denote internally caused events, the causer becomes the subject (here, *causer* does not mean an argument of the subevent CAUSE). Externally caused eventualities, however, have two subevents. Intransitive verbs can be externally caused, because the causer argument does not necessarily have to be expressed. Thus, the variable behavior of verbs of sound emission is due to an interaction of telicity and causation. For agentive verbs of manner of motion that

are telic, one argument serves as both the causer and the theme, and thus they are unaccusative. Atelic verbs may be either unaccusative (if externally caused) or unergative (if internally caused).

2.3 Decompositional event structure: Ramchand 2008

In addition to the above semantic analyses of alternations, my analysis of Lithuanian accusative/instrumental alternations will make use of recent proposals (Ramchand 2008, Svenonius 2006) for a decompositional verb phrase as a means to capture such argument structure and event structure alternations. The central premise of Ramchand's 'first phase syntax' is that the subevents that make up events are represented by functional heads. She proposes three primitive subevents: the initiation of an event, the process of the event, and the resulting state. Verbs may have optional subevents, for instance *break* or *melt*. The causing subevent (initiation in Ramchand's terminology) is present when these verbs are transitive, and absent when they are intransitive. The result subevent is an indicator of telicity, because a predicate can only be telic when there is a result that is attained. Ramchand proposes that these three subevents are represented by the functional heads *init*, *proc* and *res*. Each head can also project a 'subject', so an event may have an INITIATOR (subject of *init*), an UNDERGOER (subject of *proc*) and a RESULTEE (subject of *res*):

(17)



Additionally, there can be a PATH or a RHEME, which gives additional information about or description of the event, depending on where in the structure it is attached. In (17) this is represented by the XP

complement of *res*. For instance, a RHEME complement of *proc* is a PATH (trajectory traversed by UNDERGOER).

Not every event necessarily has all three subevents, and the functional heads can be coreferential: lexical items with *res*, *proc* and/or *init* features can (re)merge into those positions, as each subevent may not have a unique lexical representation. Additionally, "…lexical items appear to impose a requirement concerning whether the specifier positions made available by the subevental heads are filled by distinct nominal projections, or by the same nominal projection" (Ramchand 2008, 60). This results in composite roles: the same argument is the holder of multiple states: INITIATOR-UNDERGOERS, RESULTEE-UNDERGOERS. Examples of the different types of arguments are given in (18), from Ramchand 2008:

(18) a. Pure INITIATOR: The key *opened the lock*

b. Pure UNDERGOER: *Karena drove* the car

c. PATH: *Ariel ate* the apple; *Kayleigh drew* a circle

d. Pure RESULTEE: *Katherine ran* her shoes *ragged*

e. INITIATOR-UNDERGOER: Karena *ran to the tree*; The diamond *sparkled*

f. RESULTEE-UNDERGOER: *Michael pushed* the cart *to the store*

In my analysis of the alternations below, I will employ the functional structure given in (17), with a minor addition. I will follow Pylkkänen (2008) and Lavine (2010) in further decomposing *init* into two subevents: VOICE, which introduces the external argument (cf. Kratzer 1996), and CAUSE, which introduces the causing event, but not necessarily a causer. Pylkkänen argues that CAUSE does not necessarily introduce an external argument: there are causative verbs (e.g., in Finnish and Japanese) that do not have an overt causer argument, and there are external arguments that are not necessarily causers, such as the subjects of unergative verbs like *work* or *run*. This also allows for a structural representation of the internal/external causation distinction made by Levin & Rappaport Hovav (1997).

Lavine (2010) gives further evidence from Ukrainian that a CAUSE subevent need not have an overt argument associated with it, but that

it is crucial to the licensing of accusative case. This divides the two functions of *v* between two heads, and the result is that verb phrases that lack an external argument may nonetheless be transitive if there is a causing subevent. As I will show below, this split-*init* hypothesis bears on the licensing of accusative in the Lithuanian alternations.

Following this decompositional analysis of event structure, I will show how the semantic differences in the instrumental/accusative case alternations can be represented in a structure like (17). Accusative case is licensed on arguments with a greater number of Proto-Patient properties.

This leaves the problem of licensing instrumental case, which is semantically motivated with these verbs. When the instrumental occurs, it is interpreted as an instrument, or the means, for performing the action (Šukys 2005), which is linked to the theta role it is assigned. Ramchand argues that in a decompositional verb phrase, there is no need for theta roles. However, there is evidence for theta-related case that is not purely a requirement of the verb (see Babby 1994 for argumentation), particularly on nominal adverbs. I will continue to assume that there is semantic case, or theta case, which is assigned to paths and rhemes based on their interpretation. This is similar to Letuchiy's (2007) claim that instrumental is used with verbs of moving a body part because of the similarity to 'pure' instruments, and presumably the same theta role is involved.

In the following sections, I will discuss in turn each semantic class of verbs that allow the accusative/instrumental alternation. In each section, I will show how accusative case patterns with a greater number of Proto-Patient properties.

3. Verbs of moving body parts

The first class of verbs I will discuss that exhibit the accusative/instrumental alternation comprises many verbs that involve moving a body part. As mentioned above, there are some overlaps with Russian in this category; these are examined in Wierzbicka (1980) and Letuchiy (2007). Verbs in this class can denote an action performed either on or by means of a body part, and some only take a body part as their internal argument. In Lithuanian, there are verbs in this class

that license only accusative, others that license only instrumental, and others that license either case, as shown in (19–21) respectively (adapted from Ambrazas 2006).

(19) Accusative only:

a. *supti* *kojas/*kojomis*
to-swing legs.ACC/*INST

b. *sukryžiuoti* *kojas/*kojomis*
to-cross legs.ACC/*INST

(20) Instrumental only:

a. *gūžčioti* *pečiais/*pečius*
to-shrug shoulders.INST/*ACC

(21) Accusative or Instrumental:

a. *linguoti* *galva/galvą*
to-nod head.INST/ACC

b. *kinkuoti* *galva/galvą*
to-nod head.INST/ACC

c. *karpyti* *ausimis/ausis*
to-move ears.INST/ACC

d. *griežti* *dantimis/dantis*
to-gnash teeth.INST/ACC

e. *kalenti* *dantimis/dantis*
to-chatter teeth.INST/ACC

f. *skėsčioti* *rankomis/rankas*
to-throw up arms.INST/ACC

g. *traukyti* *pečiais/pečius*
to-shrug shoulders.INST/ACC

h. *vizginti* *uodega/uodegą*
to-wag tail.INST/ACC

The verbs in (21) are also discussed in Šukys (2005) as a group of verbs that can be used with either the 'instrumental of means' (*priemonės*

įnagininkas) or 'accusative of object' (*objekto galininkas*) (2005, 136). The accusative with the verbs in (21) can yield the interpretation that the internal argument is more affected, or has undergone some change. In this way, the accusative patterns more with Proto-Patient. The instrumental does not yield such an interpretation. For example, in shrugging one's shoulders, the shoulders move up and down, but they are in the same position before and after the shrugging, which is not the case with all actions. Given that 'to shrug one's shoulders' can nevertheless use either case, it would seem that your claim is that the shoulders are nevertheless *construed* as more affected or changed in state when ACC is used, even though the physical reality is the same in both cases. Furthermore, some of these actions are automatic physical responses. Teeth chatter from the cold, some people grind their teeth in their sleep, and few people can actually control the movement of their ears. Other actions in this category are communicative, such as nodding one's head in assent.

Letuchiy (2007) analyzes verbs with body part objects in Russian, and his analysis is quite informative for understanding the Lithuanian alternation. In Russian, as in Lithuanian, many verbs with a body part as internal argument use instrumental case rather than accusative. Letuchiy points out that this is in part due to the fact that the body part can be construed as an extension of the subject, and in that sense is not a canonical direct object. It is possible that the instrumental body part NPs could be interpreted as adjuncts, rather than arguments (Rok Žaucer, p. c.). Additionally, these arguments seem to be similar in meaning to canonical instrumentals (e.g., *write with a pen*), yielding Šukys' (2005) interpretation that they are a means for performing the action rather than undergoing the action.

Additionally, when these verbs appear with the instrumental, they cannot be interpreted as verbs of directed motion. The verbs that license accusative on body part internal arguments do have a directed motion interpretation, which also corresponds to an action on the argument. This is seen in (22), where a directional resultative is only possible with the accusative:

(22) *Traukyk* *pečius/*pečiais* *iki* *ausų.*
shrug.IMPV shoulders.ACC/*INST to ears
'Shrug your shoulders to your ears'

In (22), the internal argument 'shoulders' can only be interpreted as undergoing the action, not a means of performing it.

Letuchiy (2007) points out that the accusative/instrumental alternations pattern with two types of verbs discussed in Levine & Rappaport Hovav: verbs of means and verbs of result. In Russian and Lithuanian, verbs of means are transitive, as long as the object is not a body part. The instrumental is used if the object is not a strong candidate for Proto-Patient. The objects in (21) are not necessarily Proto-Patients: the body part does not necessarily undergo a change of state, nor is it causally affected by another participant. In fact, arguably there is really only one participant, since the body part is a subpart of the subject. This also helps explain why, with some of these verbs in Russian, accusative is only possible if the body part belongs to a person other than the subject.

Verbs of result, on the other hand, involve an inherent change in location of the patient. As shown in (22), as well as by the verbs in (19), there is directional movement of a body part, resulting in a change in its position. It is also worth pointing out that this alternation is not necessarily limited to movement of body parts. The Russian verb *dvigat'* 'move' also allows instrumental when it is interpreted as a verb of means (of movement), rather than in its usual directed motion interpretation.

(23) a. *dvigat'* *stul*
to-move chair.ACC

b. *dvigat'* *stulom*
to-move chair.INST

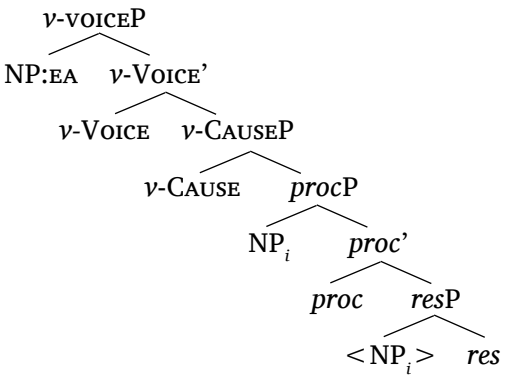
Demjjanow & Strigin (2000) suggest that the difference between the verb phrases in (23) is that (23b) implies that the subject is sitting in the chair and moving around in it, while (23a) indicates that the subject cannot be sitting in the chair.

3.1. Analysis

The accusative, as in (22), is licensed when the body part is truly affected (i. e., undergoes a change of position or state), and thus has more properties of a Proto-Patient. Furthermore, these verbs appear to

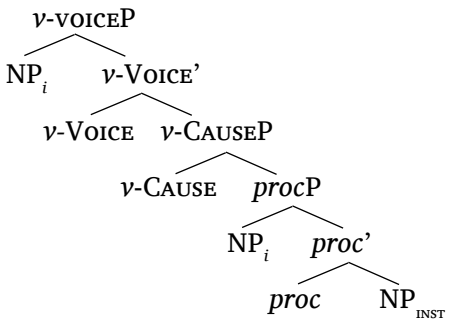
be telic, entailing that a result subevent is present in the structure. In Ramchand's framework, the body part is an UNDERGOER-RESULTEE. The structure is shown in (24). The index *i* indicates that the NP initially merges as the subject of *res*, but moves to the subject position of *proc*, causing it to be interpreted as an UNDERGOER-RESULTEE.

(24)



For the verbs that license instrumental, there is no *res* head because these verbs are atelic. There is no change of state/position for the internal argument. However, there is identification of Agent and UNDERGOER, accounting for the fact that the body part is perceived as extension of the Agent. The instrumental is a rheme, modifying the *proc* head. The choice of instrumental case can be attributed to the fact that these verbs are interpreted as verbs of means, which appear with instrumental case in Lithuanian (as well as Russian), rather than a PP. The structure for a verb phrase with an instrumental body part is shown in (25):

(25)



This structure captures the fact that the internal argument is not a Proto-Patient; the external argument is both Agent and Patient

(INITIATOR and UNDERGOER in Ramchand's terms). Furthermore, the instrumental RHEME is not necessarily limited to verbs of body part motion, as shown above in (25), and also with other instrumentals (e.g., *write with a pen*).

4. Verbs of making sound

Next I will consider verbs that denote making sounds. Unlike the intransitive verbs of sound emission discussed above, I consider only transitive verbs of sound. Here, the internal, rather than the external, argument is the source of the sound, and the verb describes the type of sound: rattling, jingling, etc. Examples are given in (28):

(26) a. *barškinti* *indais/indus*
to-rattle crocker.INST/ACC

b. *žvanginti* *raktais/raktus*
to-jingle keys.INST/ACC

c. *skambinti* *taurėmis/taures*
to-tinkle wineglasses.INST/ACC

d. *trenkti* *durimis/duris*
to-bang door.INST/ACC

e. *sumušti* *kulnais/kulnus*
to-click heels.INST/ACC

f. *birbinti* *vamzdeliu/vamzdelį*
to-play reed-pipe.INST/ACC

g. *čirpinti* *smuiku/smuką*
to-play/chirp fiddle.INST/ACC
(from Ambrazas 2006)

The verbs in (26) mostly feature the semi-productive causative suffix *-(d)in-*, *-(d)y-*, and have intransitive counterparts. The exceptions, *trenkti* 'to bang' and *sumušti* 'to click', have many additional meanings aside from the ones related to making sound. The non-causative forms of some of these verbs are shown in (27):

(27) a. *barškėti* ‘to rattle’

b. *žvangėti* ‘to jingle’

c. *skambėti* ‘to ring’

These verbs differ not only morphologically, but also in their argument structure. The non-causative verbs in (27) can have either one or two arguments. When they are monadic, the sole argument expresses the source of the sound (as with the verbs of sound emission discussed in section 2.2) and is marked nominative. A second argument can occur, and it will be in the instrumental case, never in the accusative.

(28) a. … *kad* *net* *dantys* *barškėjo*
COMP even teeth.NOM rattled
‘so that even (one’s) teeth rattled’

b. [*jis*] *lėkė* *per* *cechą* *linksmai* *skaitliukais*
[he] flew across workshop happily abacus.INST
barškėdamas.
rattling.PTCP
‘He flew around the workshop jumping, happily rattling the abacus’ [Lithuanian online corpus]

As with the verbs of body part motion above, there is a subtle difference in meaning between instrumental and accusative case on the internal argument of the verbs in (26). The instrumental case often expresses the *means* of performing an action rather than an UNDERGOER-type argument. Thus, we might expect the difference between accusative and instrumental to be restated as in (29a–b), respectively:

(29) a. accusative = make the keys jingle
b. instrumental = make a jingle with the keys

This difference in meaning is subtle, but important. For some speakers, the accusative with these verbs indicates that something is being done to the object, and the result is a sound. This corresponds to the property of ‘causal affectedness’ for Proto-Patients, though there is no change of state. Thus, there is a difference in terms of Proto-Patient properties for the interpretation of accusative vs. instrumental. The instrumental, however, is more commonly accepted (and used, accord-

ing to searches of the online corpus), perhaps because these verbs' internal arguments have so few Proto-Patient properties. Furthermore, Paducheva (1998) suggests that, in Russian, verbs of sound that take instrumental internal arguments may have a null cognate object[4]. This also helps explain the argument structure alternation of non-causative verbs. Generally, internal arguments can only be expressed as subjects with the addition of the reflexive affix (especially in Russian, but also in Lithuanian).

(30) a. *Ivan otkryvaet dver'.*
Ivan opens door.ACC
'Ivan opens the door'

b. *Dver' otkryvaet*(sja).*
door.NOM opens(REFL)
'The door opens'

As pointed out by Paducheva, however, the reflexive is not used when instruments are expressed as the subject (cf. the discussion of *fill*-type argument selection alternations above), additional evidence that the argument is not a Patient when marked with instrumental case:

(31) a. *Ivan napolnil jamu vodoj.*
Ivan filled pit:ACC water:INST
'Ivan filled the pit with water'

b. *Jama napolnila*(s') (vodoj).*
pit:NOM filled*(REFL) (water:INST)
'The pit filled with water.'

c. *Voda napolnila jamu.*
water:NOM filled pit:ACC
'The water filled the pit'
[adapted from Babby 1998]

The fact that an accusative argument with verbs of sound is interpreted as causally affected explains why it is only possible with the

[4] Russian verbs of sound only allow instrumental on internal arguments; they can also appear intransitively with the subject expressing the source of the sound.

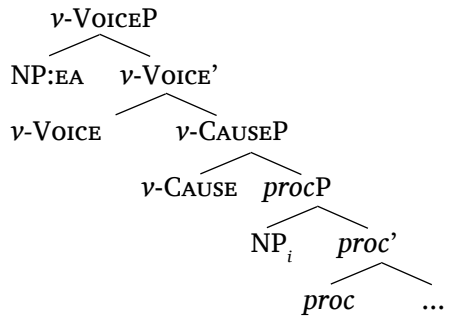
causative verbs. Here, the external argument is a stronger candidate for Proto-Agent. Causation itself will also play a role in explaining the alternation.

4.1. Analysis

Levin & Rappaport Hovav (1997) showed there to be two types of causation involved in verbs of sound: internal and external. This difference can be applied here, especially given that instruments can be causers. Thus the non-causative verbs can still have a CAUSE subevent, but do not need to have an associated argument. For the causative verbs, there is external causation only, which accounts for the increased agentivity, and the fact that it is possible to interpret the internal argument as a Proto-Patient (and thus assign it accusative case). The most interesting fact is that instrumental is still possible with the causative.

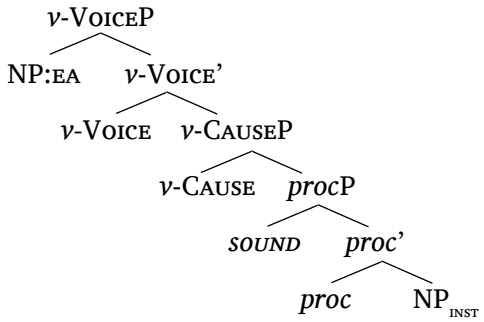
Causative verbs of sound also have a sort of argument structure alternation. The source of sound can be UNDERGOER (marked with accusative), or a RHEME (instrumental) that modifies the verb.

(32)



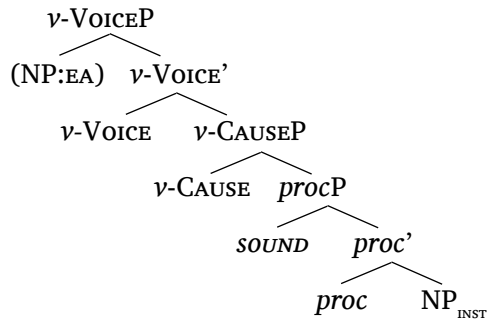
If the internal argument is a RHEME, I assume that a cognate object meaning the type of sound named by the verb occupies the subject position of *proc*. This is shown in (33).

(33)



For non-causative verbs of making sound, the instrumental argument is a rheme that modifies the *proc* head. There is no *res* because there is no change of state or position. A cognate object occupies the subject position of *proc*. The source can be promoted to grammatical subject if no external argument is licensed by Voice. This also allows for the internal causation interpretation of intransitive verbs of sound, without requiring the source to be an argument of Cause *per se*.

(34)



5. Verbs of Dressing & Wearing Clothing

The final type of verb that allows for the accusative-instrumental case alternation comprises verbs of dressing and wearing clothing and shoes. In Lithuanian, this class is quite large, as different types of garments use different verbs, as shown in table 1:

Table 1. Verbs of dressing and wearing clothing

Dressing	Wearing	Translation	Items of clothing
rengtis	*dėvėti*	get dressed/wear	all clothes
autis	*avėti*	put on/wear shoes	shoes, boots, footwear
gaubtis	*gobėti*	wrap on/wear	wraps, shawls
juostis	*juosėti*	girdle/belt, wear a belt	belts
mautis	*mūvėti*	slide on/wear	gloves, pants, rings
rištis	*ryšėti*	tie on/wear	scarves, ties
segtis	*segėti*	fasten, button/wear	skirts, brooches, buttons
vilktis	*vilkėti*	cover, put on/wear	outerwear
—	*nešioti*	wear	all clothes, accessories

In addition to the rich lexical variety, there is also morphological variety. In the table above, all the verbs of dressing are reflexive, but each can also be non-reflexive. The non-reflexive form can only be used when the action refers to putting clothes on another person.

(35) a. *Rasa ap-rengė vaiką.*
Rasa PRF-dressed child.ACC
'Rasa dressed the child'

b. *Vaikas ap-si-rengė.*
child PRF-REFL-dressed
'The child got dressed' (The child dressed himself)

The verbs of putting clothes on in table 1 are unprefixed, and are ambiguous between putting clothes on and taking them off—when the accusative is used. With the instrumental, the verbs can only refer to putting clothes on. This paradigm is shown in (36):

(36) a. *Jonas avė-si naujus batus.*
Jonas put-on-REFL new.ACC shoes.ACC
i. 'Jonas put on new shoes'
ii. 'Jonas took off new shoes'

b. *Jonas avė-si naujais batais.*
Jonas put-on-REFL new.INST shoes.INST
i. 'Jonas put on new shoes'
ii. *'Jonas took off new shoes'

The addition of the prefix *nu-* also resolves the ambiguity by eliminating the meaning of putting on clothing or shoes, as in (37):

(37) a. *Jonas ap-si-avė naujus batus.*
Jonas PRF-REFL-put-on new.ACC shoes.ACC
'Jonas put on new shoes' (*'Jonas took off new shoes')

b. *Jonas* nu-*si-avė naujus batus.*
Jonas PRF-REFL-put-on new.ACC shoes.ACC
'Jonas took off new shoes' (*'Jonas put on new shoes')

Other prefixes can add additional semantic content, and also affect the argument structure. As shown in (38), if the prefix introduces an accusative argument, the other internal argument must be instrumental.

(38) a. *ap-(si)-rišti galvą skarele /*skarelę*
PRF-REFL-to-tie head.ACC kerchief.INST /*ACC
'to tie a kerchief around (one's) head'

b. *su-si-juosti kelnes diržu /*diržą*
PRF-REFL-to-girdle trousers.ACC belt.INST /*ACC
'to girdle one's trousers with a belt'

If the prefixed form occurs with a PP rather than an accusative NP, then accusative is acceptable and instrumental is not, as shown in (39):

(39) a. *už-si-rišti ant galvos skarelę / *skarele*
PRF-REFL-to-tie on head scarf.ACC / *INST
'to tie up a kerchief on one's head'

b. *su-si-juosti* *juostą* / **juosta* *ant marškinių*
PRF-REFL-to-put-on belt.ACC / *INST on shirt
'to put a belt on one's shirt'

c. *(į)-segti* *sagą* / **saga* *į suknelę*
PRF-to-fasten brooch.ACC / *INST to dress
'to fasten a brooch to a dress'

The alternation of case forms and PPs in (38) and (39) is similar to the argument structure alternations in *spray/load* verbs, as discussed in section 2.1:

(40) a. *They loaded the hay onto the truck.*
b. *They loaded the truck with the hay.*

However, the verbs of dressing only show this argument structure alternation when the prefix changes. It is possible that these prefixes introduce particular arguments (see Babby 2009 for instances of this in Russian), which change the Proto-Patient properties. This was seen with the variety of verbs like *hit* that either allow the Location or Instrument to be expressed as a PP, rather than a Proto-Patient, as in (10) and (11) above.

5.1. Analysis

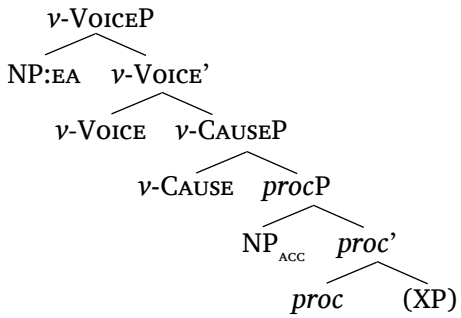
One possible explanation for the alternation is that the reflexive affix with the verbs of putting on clothes can stand in for either the Patient or the Benefactor. Thus, when the reflexive affix expresses the Patient, only the instrumental is possible, and when the reflexive affix expresses the Benefactor, the accusative is still possible[5]. However, this does not account for the fact that the verbs of wearing clothes, which are always non-reflexive, also take part in this alternation. Thus, even if the reflexive analysis is correct, there is still an unresolved alternation involving accusative and instrumental case with this latter class of verbs.

When accusative is licensed on the internal argument (the item of clothing), it is interpreted as more like a Proto-Patient: it is undergo-

[5] Thanks to Axel Holvoet for suggesting such an analysis of this alternation.

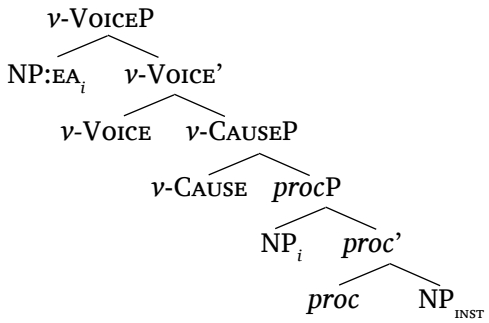
ing some change of position, and it is causally affected by the external argument. This is not the case for instrumental internal arguments, as has been shown throughout this paper. I propose that the verbs of dressing, even the unprefixed ones, have a type of argument selection alternation, much like the *spray/load*–type verbs discussed in Dowty 1991. However, unlike *spray/load*–type verbs, which are three-place predicates, these verbs display an alternation even though they are two-place predicates. When the internal argument is a Proto-Patient, it is licensed as the direct object, as in (41). When it is not, the internal argument is licensed as an oblique argument, as in (42).

(41)



In (41), the option for a PATH complement of *proc* is available, as expressed in certain prefixed verbs of dressing, such as (39), in which the item of clothing changes position.

(42)



In (42), the external argument and subject of *proc* are co-indexed, indicating that the subject is coreferential with the undergoer, which I assume is due to the lexical semantics of this class of verbs, regardless of being reflexive or not. The instrumental NP in (42) is a modifier, assigned semantic case, and is somewhat adverbial in nature, rather

than an argument. This reflects the native speaker intuition that instrumental with these verbs is used to answer the question *kaip* 'how', and many speakers preferred instrumental with adjectival modifiers to highlight the type of clothing, or how one is dressed:

(43) a. *Šiandien ap-si-rengiau* naujais *marškiniais*.
Today PRF-REFL-dress.1.PST new.INST shirt.INST
'Today I put on my new shirt.'

b. *Šiandien šalta, renki-s* šiltais *marškiniais.*
Today cold put-on.IMPV-REFL warm.INST shirt.INST
'Today is cold, put on a warm shirt'
(Rolandas Mikulskas, p.c.)

6. Conclusion

I have argued that the alternation of accusative and instrumental case on the internal argument of certain semantic classes of verbs is related to differences in the semantic interpretation of the argument, and to the verbs' event structure. For the three classes of verbs that participate in this alternation, the morphological cases are the same. Accusative case is available when the internal argument has more properties of a Proto-Patient. Instrumental is used when this interpretation is not available. The fact that it is always instrumental that alternates with accusative is perhaps due to other uses of this case, particularly its use to express the means by which the action is carried out.

I have also used a decompositional verb phrase, with functional structure representing the event structure of a predicate, to capture these differences in interpretation. By distinguishing between the three subevents of an event—causation, process and result—it is possible to bring to light finer-grained differences between internal arguments, and perhaps to distinguish between the degrees of transitivity and differences in the quantity of Proto-Patient properties.

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Abbreviations

1 — 1st person, acc — accusative, comp — complementizer, gen — genitive, impv — imperative, inst — instrumental, neg — negation, nom — nominative, prf — prefix, prs — present, prt — particle, pst — past, ptcp — participle, refl — reflexive

References

Ambrazas, Vytautas, ed., 2006. *Lithuanian grammar*. Vilnius: Baltos lankos.

Babby, Leonard. 1994. Case theory. In: Carlos Otero, ed., *Noam Chomsky: Critical assessments (Vol I: Linguistics: Tome II)*. London-New York: Routledge, 630-52.

Babby, Leonard. 1998. Diathesis & Voice in Slavic. Position paper presented at the Workshop on Comparative Slavic Morphosyntax, Spencer, Indiana. Available from: <http://www.indiana.edu/~slavconf/linguistics/babby.pdf>

Babby, Leonard. 2009. *The syntax of argument structure*. Cambridge/New York: Cambridge University Press.

Demjjanow, Assinja & Anatoli Strigin. 2000. Case Assignment to Conceptual Structures: the Russian Instrumental. In: Marcus Kracht & Anatoli Strigin, eds., *Papers on the Interpretation of Case*. Potsdam: University of Potsdam, 75-107.

Dowty, David. 1991. Thematic Proto-Roles and Argument Selection. *Language* 67:3, 547–619.

Kratzer, Angelika. 1996. Severing the external argument from its verb. In: Johan Rooryck & Laurie Ann Zaring, eds., *Phrase structure and the lexicon*. Dordrecht: Kluwer Academic Publishers, 109–138.

Lavine, James. 2010. Case and events in Transitive Impersonals. *Journal of Slavic Lingusitics* 18:1, 101–130.

Letuchiy, Aleksandr. 2007. Творительный падеж при русских переходных глаголах: конструкции с объектами-частями тела (Instrument Case With Russian Transitive Verbs: Constructions With Body Parts As Objects). In *Сборник научных работ молодых филологов «Русская филология» (Collection of works by young philologists «Russian Philology»)*. Tartu.

Levin, Beth & Malka Rappaport Hovav. 1995. *Unaccusativity: At the Syntax-Lexical Semantics Interface*. Cambridge, ma: mit Press.

Levin, Beth & Malka Rappaport Hovav. 1997. Lexical Semantics and Syntactic Structure. In: Shalom Lappin, ed., *The Handbook of Contemporary Semantic Theory*, 487–507.

Paducheva, Elena. 1998. Paradigms of Semantic Derivation for Russian Verbs of Sound. In: Thierry Fontenelle *et al.*, eds., *Actes Euralex 1998. Proceedings*. Vol. i. Liège: Université de Liège, English and Dutch Departments, 231–238.

Pylkkänen, Liina. 2008. *Introducing arguments*. Cambridge, ma: mit Press.

Šukys, Jonas. 2005. Veiksmo atlikimo priemonės raiška [Expressing means of performing an action]. *Kalbos kultūra* 78, 133–143.

Wierzbicka, Anna. 1980. *The case for surface case.* Ann Arbor, mi: Karoma Publishers.