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From transitivity to aspect: the causative-inchoative alternation and its extensions in Lithuanian

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This paper proposes a unified treatment of two important types of morpho-semantic correlations involving Lithuanian verbs forming their present stem with nasal infix or suffix *-st*: the causative/inchoative correlation of the type *kilti* 'rise' (intransitive) vs. *kelti* 'raise' (transitive) and the purely aspectual (actional) correlation of the type *verkti* 'weep' (atelic process) vs. *pravirkti* 'start weeping' (telic achievement), involving mostly intransitive verbs differing as process/state vs. event and not affecting their argument structure. It is argued that the latter correlation, despite having been largely neglected in the literature, is even more widespread in Lithuanian than the former. It is argued that the aspectual correlation has undergone extension in the more recent history of Lithuanian, and a diachronic scenario is outlined accounting for the semantic and morphological links between the older transitivity alternation and the newer actional alternation.

Keywords: transitivity, aspect, ablaut, verb classes, derivation, Construction Morphology

1. Introduction[1]

Lithuanian (similarly to Latvian) is outstanding among the European languages in that it possesses both a fairly productive morphological

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causative (the most used suffixes are *-(d)in-ti* and *-(d)y-ti*, cf. Latvian *-(d)ināt*) and an even more productive morphological anticausative based on the reflexive marker *-si* (cf. Krinickaitė 1979; Paulauskienė 1979, 22–55; Geniušienė 1983; 1987; Toops 1994; Ambrazas 1997, 223–234; Petit 1999, 78–103). In this paper I will discuss a less productive and more morphologically idiosyncratic valency-affecting operation in Lithuanian, which is interesting primarily because of the rather unexpected semantic shifts it has undergone.

The focus here will be on the correlative verbal pairs one of the members of which belongs to the so-called *n/st*-class of Lithuanian verbs, viz. those 'primary' or 'root' verbs[2] which form their Present stem either by nasal infixation, or by the suffixation of *-st* (in verb stems ending in a sibilant, both morphological operations apply), see examples below. These verbs have received quite a lot of attention from scholars, both from a synchronic and from a diachronic perspective (cf. Leskien 1884, 381ff; Stang 1942, 132–133; Hofmann 1956; Kuryłowicz 1956; Kazlauskas 1968, 316–336; Toporov 1973; Temčin 1986; Wiemer 2004; Arkadiev 2005; 2006a; 2006b; 2008; 2010; Gorbachov 2007; Pakerys 2007), and it has been established that they form a semantically highly homogeneous class denoting spontaneous uncontrolled processes or events. Most of the studies I know of have paid primary attention to the correlation between the intransitive *n/st*-verbs and their transitive counterparts (see, e. g., Arumaa 1957; Kazlauskas 1968, 319–323; Krinickaitė 1979; Banelis 1979; Stepanov 1975, 167–182; 1976; 1977; 1978; 1989, Ch. 6; Valeckienė 1998, 27–28). However, there exist a large number of *n/st*-verbs which enter into an opposition related to aspect or event-type rather than to valency and transitivity: they are opposed to their morphological correlates as punctual (inchoative or ingressive) vs. durative (processual or stative). In contrast to the relatively well-studied causative-inchoative verbal pairs, this second type of opposition involving the Lithuanian *n/st*-verbs has largely escaped scholars' attention; e. g., in his quite comprehensive and far-reaching discussion of the correlations between verbal classes in Lithuanian, Jurij Stepanov (see works mentioned above) does not treat the aspec-

[2] According to the traditional morphological classification of Lithuanian verbs (see, e. g., Ambrazas, ed., 1997, 285–296), primary verbs are those which do not employ thematic vowels or derivational suffixes; in particular, their infinitive is based directly on the root.

tual correlations discussed in this paper in any systematic fashion and mentions them only cursorily.

The goal of my paper is thus to provide a representative data set of this type of verbal pairs attested in contemporary Lithuanian and to argue for a unified account of both causative/inchoative and aspectual correlations, in particular, to outline a diachronic scenario in which the more ancient causative/inchoative opposition has been extended to the punctual/durative one.

The paper is structured as follows. In section 2 I give a general outline of the phenomenon I am going to discuss. In section 3 I provide a representative sample of verbal pairs classified according to their morphological and morphophonological features. In section 4 I discuss the semantic oppositions in the verbal pairs of different types. Section 5 is devoted to the synchronic and diachronic interpretation of the phenomenon in question.

2. The phenomenon

In Lithuanian[3], there exist several dozen pairs of primary verbs whose members are related in the following way:

- one member of the pair is intransitive (usually denoting a non-agentive process or change of state), forms its Present tense stem by *n*-infixation[4] or *st*-suffixation and shows the 'weak' grade of vocalic ablaut;
- the other member of the pair is transitive and denotes the agentive causation of the event expressed by the corresponding intransitive verb, belongs to the inflectional class where the stem-final consonant is palatalized in the Present and Preterite forms, and shows the 'strong' grade of ablaut.

[3] For the sake of consistency I take into account only the contemporary standard language as represented by grammars such as Ambrazas, ed. (1997) and dictionaries such as DLKŽ or LRKŽ, and the corpus LKT. Dialectal materials and data from older stages of the language are excluded not only because they are not so easily accessible, but also because they are not easily interpretable from the point of view of a coherent linguistic system, and clearly should not be lumped together with the contemporary standard data, which is often done in historical-comparative discussions.

[4] It must be kept in mind that in verbs whose stem ends in a non-obstruent, viz. a sibilant or a sonorant, the nasal infix has disappeared, leading to compensatory lengthening of the root vowel, thus *kilti* 'rise' ~ Prs *kyla* /k'i:la/ < **ki-n-l-a*.

The terms ‘weak’ grade and ‘strong’ grade of ablaut are understood in synchronic terms as corresponding to the first resp. second member of the following vocalic alternations operative in Lithuanian word formation: *i, y* /i:/ ~ *e* /æ/, *ė* /e:/; *i, y* ~ *ei, ie*; *u, ū* /u:/ ~ *au, uo*. From the phonological point of view, there are two kinds of opposition here: the one between the *i*-type vowels and the *e*-type vowels, and the other between monophthongs (short or long) and diphthongs.

Some examples of the causative/inchoative alternation of this kind are given in (1). According to the reverse dictionary of Lithuanian (Robinson 1976) based on one of the earlier editions of DLKŽ, contemporary Lithuanian has about 50 such pairs[5], which constitute the oldest layer of transitivity-related formations in Baltic (see Stang 1942; Arumaa 1957). These causative/inchoative pairs ultimately go back to the Indo-European prototype, and do not by themselves present anything special from a typological or theoretical point of view (cf. Haspelmath 1993, Comrie 2006)[6].

(1) *dribti* ‘fall’ (Pres. *dri-m-ba*) ~ *drėbti* ‘drop’ (Pres. *drebia*)
linkti ‘bow’ (Pres. *link-st-a*) ~ *lenkti* ‘bend’ (Pres. *lenkia*)
jukti ‘become mixed’ (Pres. *ju-n-ka*) ~ *jaukti* ‘mix’ (Pres. *jaukia*)

However, the causative-inchoative alternation outlined above is not the whole story. First, there exist a considerable number of verbal pairs morphologically related in the same way but exhibiting a different semantic opposition, viz. the one where the *n/st*-verb (more often than not containing a prefix, which in Lithuanian, similarly to Slavic, induces a change of the verb’s aspectual class) denotes an entry into a state or a process denoted by the other member of the pair, cf. (2a). Second, *n/st*-verbs form regular correlations with verbs of other inflectional types (non-primary and even suffixally derived verbs), and such pairs exhibit the same aspectual opposition of meaning, cf. (2b).

[5] However, Temčin (1986, 87) claims that the number of such pairs attested across various dialects amounts to several hundred.

[6] Though it should be noted that Nichols *et al*. (2004) found that ablaut is not a cross-linguistically widespread way of expressing transitivity alternations.

(2) a. *pra-virkti* 'burst into tears' (Pres. *pra-virk-st-a*) ~ *verkti* 'weep' (Pres. *verkia*)
b. *pra-gysti* 'start singing' (Pres. *pra-gys-t-a*) ~ *giedoti* 'sing' (Pres. *gieda*)

The total number of the non-causative/inchoative verbal pairs with an *n/st*-member in my sample (see below) is ca. 70, which even exceeds the number of genuinely transitive/intransitive pairs. Thus it is not justified to limit the discussion of the Lithuanian *n/st*-verbs and their relations with other morphological classes to the causative/inchoative pairs, ignoring the other type of correlation as subsidiary and insignificant. The goal of my paper is thus twofold: From the purely descriptive point of view, I aim to give a representative set of the relevant verbal pairs, cross-classifying them according to the formal and semantic relationships between them. From a more theoretical stance, I try to show that the fact that two different types of lexical-semantic relations in Lithuanian happen to share a common morphological pattern is not random but is motivated both from a synchronic and from a diachronic point of view.

The primary sources of data I have used are the Lithuanian reverse dictionary (Robinson 1976) supplemented by the Lithuanian-Russian dictionary (LRKŽ) and the online version of the Dictionary of the Lithuanian Language (LKŽ). As mentioned in footnote 3, only verbs attested in contemporary standard usage are included in the database, the dialectal and historically attested but obsolete verbs being mostly excluded from consideration. All in all, my sample includes more than 130 verb pairs.

3. The morphological classification of verbal pairs

In the following tables 1 and 2 I simply present my whole database arranged according to the formal relations between the members of the pairs (cf. similar, though not exhaustive, lists in Stepanov 1975, 180–181; Valeckienė 1998, 27–28). Two basic types are distinguished: Type I, where both verbs are primary and exhibit an ablaut correlation, whose subtypes serve as the basis for the further sub-classification, and Type II, encompassing pairs whose other (non-*n/st*) member is not a primary verb. These are subclassified according to whether there is

ablaut or not, too. For the sake of exposition, in Type I, causative/inchoative and non-causative/inchoative pairs are given in separate columns; for type II this division is irrelevant, since there are (almost) no causative/inchoative pairs in this class. All verbs in tables 1 and 2 are accentuated according to the Lithuanian tradition; in further exposition the accent marks will be omitted unless necessary for argumentation.

Table 1. Pairs with both members primary verbs (Type I)

Causative-inchoative	Other
Ablaut type: *i*~*e* (*ė*) + sonorant[7]	
bìrti (*bỹra*, *bìro*) 'pour (ITR)' — *beřti* (*bẽria*, *bẽ̌rė*) 'scatter (TR)'	***pra**-vìrkti* (*pravìrksta*, *pravìrko*) 'burst into tears', ***su**-vìrkti* 'id.' — *veřkti* (*veřkia*, *veřkė*) 'weep'
žìrti (*žỹra*, *žìro*) 'fall, spill (ITR)' — *žeřti* (*žẽria*, *žẽ̌rė*) 'pour (TR), strew'	***iš**-žiřgti* (*iššiřgsta*, *iššiřgo*) 'stretch one's legs' — *žeřgti* (*žeřgia*, *žeřgė*) 'spread (one's legs) wide'
miřkti (*miřksta*, *miřko*) 'soak (ITR)' — *meřkti* (*meřkia*, *meřkė*) 'soak (TR)'	***su**-bìlsti* (*subìlsta*, *subìldo*) 'knock once loudly' — *bélsti* (*béldžia*, *béldė*) 'knock'
viřsti (*viřsta*, *viřto*) 'overturn (ITR)' — *veřsti* (*veřčia*, *veřtė*) 'throw down, overturn (TR)'	***pra**-vìmti* (*pravìmsta*, *pravìmo*) 'begin to vomit' — *vémti* (*vẽmia*, *vémė*) 'vomit'
pra-vìrti (*pravỹra*, *pravìro*) 'half-open (ITR)' — *pra-vérti* (*pràveria*, *pravérė*) 'half-open (TR)'	***pra**-žvìngti* (*pražvìngsta*, *pražvìngo*) 'begin to neigh' — *žvéngti* (*žvéngia*, *žvengė*) 'neigh'
viřžti (*viřžta*, *viřžo*) 'become compressed' — *veřžti* (*veřžia*, *veřžė*) 'tighten'	*grįžti* (*grįžta*, *grįžo*) 'return (ITR)' — *grę̃žti* (*grę̃žia*, *grę̃žė*) 'drill, perforate'
skiřsti (*skiřsta*, *skiřdo*) 'get chapped, crack' — *skeřsti* (*skeřdžia*, *skeřdė*) 'kill, butcher'	*tiL̃žti* (*tiL̃žta*, *tiL̃žo*) 'become wet' — *teL̃žti* (*teL̃žia*, *teL̃žė*) 'pour'
kìlti (*kỹla*, *kìlo*) 'rise, stand up' — *kélti* (*kẽlia*, *kélė*) 'raise'	*nìrti* (*nỹra*, *nìro*) 'dive' — *nérti* (*nẽria*, *nérė*) 'id.'

[7] Some verbs of this and the following ablaut types show the short *e* grade only in the Present tense (verbs with sonorant-final roots also in the Infinitive); in other forms of such verbs the short vowel has undergone lengthening to *ė*.

Continuation of Table 1

Causative-inchoative	Other
Ablaut type: *i*~*e* (*ė*) + sonorant[7]	
skìlti (*skỹla*, *skìlo*) ‘split, cleave (ITR)’ — *skélti* (*skẽlia*, *skélė*) ‘cleave, split (TR)’ *stil̃bti* (*stil̃bsta*, *stil̃bo*) ‘be choked (of plants)’ — *stel̃bti* (*stel̃bia*, *stel̃bė*) ‘choke, grow over (TR)’ *nu-ìngti* (*nuìngsta*, *nuìngo*) ‘lose hair’ — *nu-éngti* (*nuéngia*, *nuéngė*) ‘scratch’ *liñkti* (*liñksta*, *liñko*) ‘bend (ITR)’ — *leñkti* (*leñkia*, *leñkė*) ‘bend (TR)’ *tį̃sti* (*tį̃sta*, *tį̃so*) ‘stretch (ITR)’ — *tę̃sti* (*tę̃sia*, *tę̃sė*) ‘continue, extend (TR)’	*svìrti* (*svỹra*, *svìro*) ‘hang down’ — *sveĩrti* (*svẽria*, *svẽ́rė*) ‘weigh’
Ablaut type: *i*~*e* (*ė*) + obstruent	
drìksti (*drỹska*, *drìsko*) ‘tear (ITR)’ — *drẽ́ksti* (*drẽskia*, *drẽskė*) ‘tear (TR)’ *drìbti* (*drim̃ba*, *drìbo*) ‘fall’ — *drẽ́bti* (*drẽbia*, *drẽ́bė*) ‘throw’ *krìsti* (*kriñta*, *krìto*) ‘fall’ — *krẽ́sti* (*krẽčia*, *krẽ́tė*) ‘shake’ *mìgzti* (*mỹzga*, *mìzgo*) ‘get tangled’ — *mègzti* (*mẽzgia*, *mẽzgė*) ‘knot’ *plìsti* (*pliñta*, *plìto*) ‘spread (ITR)’ — *plẽ́sti* (*plẽčia*, *plẽ́tė*) ‘widen, broaden (TR)’ *rìgzti* (*rỹzga*, *rìzgo*) ‘interlace (ITR)’ — *règzti* (*rẽzga* / *rezgia*[8], *rẽzgė*)	*dvìsti* (*dvỹsta*, *dvìso*) ‘have a bad smell, become rotten’ — *dvẽ́sti* (*dvẽsia*, *dvẽ́sė*) ‘die (of animals)’ *kvìpti* (*kvim̃pa*, *kvìpo*) ‘(begin to) smell’ — *kvẽ́pti* (*kvẽpia*, *kvẽ́pė*) ‘inhale, breathe’ *grìsti* (*grỹsta*, *grìso*) ‘become boring’ — *grẽ́sti* (*grẽsia*, *grẽ́sė*) ‘menace’

[8] The standard variant of the Present tense of this verb is without palatalization, but LKŽ attests the palatalized variant as well.

Continuation of Table 1

Causative-inchoative	Other
‘weave, knit’ *tìkšti* (*tỹška*, *tìško*) ‘splash (ITR)’ — *tẽ̃kšti* (*tẽškia*, *tẽ̃škė*) ‘splash (TR), slap, bang’ *trìkti* (*triñka*, *trìko*) ‘get confused’ — *trẽ̃kti* (*trẽkia*, *trẽ̃kė*) ‘spoil’	
Ablaut type: *y*~*e* (*ė*) + obstruent	
plýšti (*plýšta*, *plýšo*) ‘tear (ITR)’ — *plė́šti* (*plė́šia*, *plė́šė*) ‘tear (TR)’ *trýkšti* (*trýkšta*, *trýško*) ‘spout’ — *trẽ̃kšti* (*trẽškia*, *trẽ̃škė*) ‘squeeze out’	
Ablaut type: *i*~*ei*	
kìsti (*kiñta*, *kìto*) ‘change (ITR)’ — *keĩsti* (*keĩčia*, *keĩtė*) ‘change (TR)’ *vìsti* (*vỹsta*, *vìso*) ‘propagate (ITR)’ — *veĩsti* (*veĩsia*, *veĩsė*) ‘breed (TR)’ *smìgti* (*smiñga*, *smìgo*) ‘pierce (ITR)’ — *smeĩgti* (*smeĩgia*, *smeĩgė*) ‘stick into (TR)’ *tìkti* (*tiñka*, *tìko*) ‘be suitable’ — *teĩkti* (*teĩkia*, *teĩkė*) ‘render’	***į****-knìbti* (*įkniñba*, *įknìbo*) ‘bury oneself (in work)’ — *kneĩbti* (*kneĩbia*, *kneĩbė*) ‘work tediously’
Ablaut type: *i*~*ie*	
strìgti (*striñga*, *strìgo*) ‘stick (ITR)’ — *striẽgti* (*striẽgia*, *striẽgė*) ‘stick (TR)’ *vìpti* (*viñpa*, *vìpo*) (cf. *vỹpti* ‘bend’ below) ‘get protruded’ — *viẽpti* (*viẽpia*, *viẽpė*) ‘open, gape’ *mìšti* (*mỹšta*, *mìšo*) ‘get mixed’ — *miẽšti* (*miẽšia*, *miẽšė*) ‘dilute’	***su****-tvìksti* (*sutvỹska*, *sutvìsko*) ‘sparkle; begin to shine’ — *tviẽksti* (*tviẽskia*, *tviẽskė*) ‘flash’ *rìkti* (*riñka*, *rìko*) ‘make mistakes’ — *riẽkti* (*riẽkia*, *riẽkė*) ‘slice’ *švìsti* (*šviñta*, *švìto*) ‘dawn’ — *šviẽsti* (*šviẽčia*, *šviẽtė*) ‘shine; enlighten’

Continuation of Table 1

Causative-inchoative	Other
su-*žìbti* (*sužiñba*, *sužìbo*) ‘begin to shine’ — *žiẽbti* (*žiẽbia*, *žiẽbė*) ‘set fire, light’	*gìžti* (*gỹžta*, *gìžo*) ‘turn sourish’ — *giẽžti* (*giẽžia*, *giẽžė*) ‘tickle’ *spìsti* (*spiñta*, *spìto*) ‘begin to swarm’ (of bees) — *spiẽsti* (*spiẽčia*, *spiẽtė*) ‘swarm’ ***su****-spìgti* (*suspiñga*, *suspìgo*) ‘utter a scream’ — *spiẽgti* (*spiẽgia*, *spiẽgė*) ‘squeal’ *lýti* (*lỹja*, *lìjo*) ‘rain; soak’ — *líeti* (*líeja*, *líejo*) ‘pour’
Ablaut type: *u~au/uo*	
gùbti (*guñba*, *gùbo*) ‘bend (ITR)’ — *gaũbti* (*gaũbia*, *gaũbė*) ‘cover, bend outwards’ *jùkti* (*juñka*, *jùko*) ‘mix (ITR)’ — *jaũkti* (*jaũkia*, *jaũkė*) ‘lump together’ *dùbti* (*duñba*, *dùbo*) ‘become hollow’ — *daũbti* (*daũbia*, *daũbė*) ‘hollow out’, *duõbti* (*duõbia*, *duõbė*, ‘id.’) *rùkti* (*ruñka*, *rùko*) ‘wrinkle (ITR)’ — *raũkti* (*raũkia*, *raũkė*) ‘wrinkle (TR)’ *mùkti* (*muñka*, *mùko*) ‘peel (ITR)’ —	***pra****-jùkti* (*prajuñka*, *prajùko*) ‘burst out laughing’ — *juõktis* (*juõkiasi*, *juõkėsi*) ‘laugh’ ***pa****-klùsti* (*paklũsta*, *paklùso*) ‘obey’ — *kláusti* (*kláusia*, *kláusė*) ‘ask’ ***pra****-džiùgti* (*pradžiuñga*, *pradžiùgo*) ‘become glad’ — *džiaũgtis* (*džiuãgiasi*, *džiaũgėsi*) ‘rejoice’[9] *klùpti* (*klumpa*, *klùpo*) ‘stumble’ — *klaũpti(s)* (*klaũpia(si)*, *klaũpė(si)*) ‘kneel (down)’[10] ***su****-stùgti* (*sustuñga*, *sustùgo*) ‘begin to howl’ — *stáugti* (*stáugia*, *stáugė*) ‘howl’

[9] Actually, the fact that this verb bears the reflexive marker *-si* indicates that originally the pair could belong to the causative-inchoative class. However, the non-reflexive variant *džiaugti* appears in LKŽ in two senses: both as a transitive ‘to make happy’ and as an intransitive stative ‘to rejoice’. Similar observations can be made about the verb *juoktis* ‘laugh’ above, which, according to LKŽ, has a dialectal non-reflexive variant.

[10] According to LKŽ, this verb is non-reflexive, however, other dictionaries as well as the corpus LKT suggest that the reflexive variant not only exists but is even more frequent than the non-reflexive one.

Continuation of Table 1

Causative-inchoative	Other
maũkti (*maũkia*, *maũkė*) ‘strip the bark from (a tree)’	*jùsti* (*juñta*, *jùto*) ‘feel’ — *jaũsti* (*jaũčia*, *jaũtė*) ‘feel’
smùkti (*smuñka*, *smùko*) ‘slip down’ — *smaũkti* (*smaũkia*, *smaũkė*) ‘pull’	***su***-*šùkti* (*sušuñka, sušùko*) ‘exclaim, cry out’ — *šaũkti* (*šaũkia, šaũkė*) ‘cry, call’
trùkti (*truñka*, *trùko*) ‘last’ — *tráukti* (*tráukia*, *tráukė*) ‘pull, drag’	*siùsti* (*siuñta*, *siùto*) ‘rage’ — *siaũsti* (*siaũčia*, *siaũtė*) ‘rage, riot’
glùsti (*gluñda*, *glùdo*) ‘snuggle to (ITR)’ — *glaũsti* (*glaũdžia*, *glaũdė*) ‘clasp to (TR)’	*bliū́ti* (*bliū̃va*, *bliùvo*) ‘bleat’ — *bliáuti* (*bliáuna*, *blióvė*) ‘id.’
dùžti (*dū̃žta*, *dùžo*) ‘break (ITR)’ — *daũžti* (*daũžia*, *daũžė*) ‘strike, cleave (TR)’	
žlùgti (*žluñga*, *žlùgo*) ‘soak (ITR); fail’ — *žlaũgti* (*žlaũgia*, *žlaũgė*) ‘boil (the washing; TR)’	
griū́ti (*griū̃va*, *griùvo*) ‘fall down’ (ū < *un, *uv) — *griáuti* (*griáuna*, *grióvė*) ‘destroy’	
Ablaut type: *y*~*ie*	
dýgti (*dýgsta*, *dýgo*) ‘sprout (ITR)’ — *díegti* (*díegia*, *díegė*) ‘plant’	
drỹkti (*drỹksta*, *drỹko*) ‘spread, stretch (ITR)’ — *driẽkti* (*driẽkia*, *driẽkė*) ‘stretch (TR)’	
skýsti (*skýsta*, *skýdo*) ‘liquefy (ITR)’ — *skíesti* (*skíedžia*, *skíedė*) ‘dilute’	
stýgti (*stýgsta*, *stýgo*) ‘stand still’ — *stíegti* (*stíegia*, *stíegė*) ‘thatch’	
nỹkti (*nỹksta*, *nỹko*) ‘disappear’ — *níekti* (*níekia*, *níekė*) ‘despise’	
vỹpti (*vỹpsta*, *vỹpo*) (cf. *vìpti*) ‘bend,	

Continuation of Table 1

Causative-inchoative	Other
curve (ITR)' — *viẽpti* (*viẽpia*, *viẽpė*) 'gape (TR)'	
Ablaut type: *y*~*ei*	
klỹpti (*klỹpsta*, *klỹpo*) 'become crooked' — *kleĩpti* (*kleĩpia*, *kleĩpė*) 'run one's shoes down on one side' *krỹpti* (*krỹpsta*, *krỹpo*) 'bend (ITR)' — *kreĩpti* (*kreĩpia*, *kreĩpė*) 'turn to (TR)'	*rýkšti* (*rýkšta*, *rýško*) 'fray; become apparent' — *réikšti* (*réiškia*, *réiškė*) 'mean' *vỹkti* (*vỹksta*, *vỹko*) 'happen' — *veĩkti* (*veĩkia*, *veĩkė*) 'do, function'
Ablaut type: *ū*~*au*	
džiū́ti (*džiū́sta/džiūva*, *džiū́vo*) 'get dry' — *džiáuti* (*džiáuna*, *džióvė*) 'hang up for drying' *lū́žti* (*lū́žta*, *lū́žo*) 'break (ITR)' — *láužti* (*láužia*, *láužė*) 'break (TR)' *rū́gti* (*rū́gsta*, *rū́go*) 'turn sour' — *ráugti* (*ráugia*, *ráugė*) 'ferment' *sprū́sti* (*sprū́sta*, *sprū́do*) 'slip off' — *spráusti* (*spráudžia*, *spráudė*) 'squeeze into (TR)'	*plū́sti* (*plū́sta*, *plū́do*) 'scold; flow' — *pláusti* (*pláudžia*, *pláudė*) 'wash' *snū́sti* (*snū́sta*, *snū́do*) 'begin to drowse' — *snáusti* (*snáudžia*, *snáudė*) 'drowse'
Ablaut type: *i*~*y*	
	su-*klìkti* (*sukliñka*, *suklìko*) 'utter a scream' — *klỹkti* (*klỹkia*, *klỹkė*) 'yell'

Table 2. Pairs with one of the members non-primary (Type II)

With ablaut
***su*-tvìksti** (*sutvỹska*, *sutvìsko*) ‘begin to shine’ — *tvykséti* (*tvýksi*, *tviksḗjo*) ‘flash’
***nu*-nìžti** (*nunỹžta*, *nunìžo*) ‘become mangy’ — *niežéti* (*niẽžti*, *niežḗjo*) ‘itch’
***pra*-gýsti** (*pragýsta*, *pragýdo*) ‘begin to sing’, ***su*-gýsti** ‘id.’ — *giedóti* (*gíeda*, *giedójo*) ‘chant’
***su*-lýsti** (*sulýsta*, *sulýso*) ‘to become thin’ — *lieséti* (*lieséja*, *liesḗjo*) ‘grow thin’ (< *líesas* ‘thin’)
Without ablaut
***pa*-mìlti** (*pamìlsta*, *pamìlo*) ‘grow fond of’ — *myléti* (*mýli*, *mylḗjo*) ‘love, be fond of’[11]
***pra*-žiùrti** (*pražiũra*, *pražiùro*) ‘recover sight, begin to see’, ***su*-žiùrti** ‘start staring’ — *žiūréti* (*žiũri*, *žiūrḗjo*) ‘look’
***pa*-kàbti** (*pakamñba*, *pakãbo*) ‘hang down, droop (ITR)’, ***nu*-kàbti** ‘id.’ — *kabóti* (*kãbo*, *kabójo*) ‘hang, be suspended’
***su*-žìbti** (*sužimñba*, *sužìbo*) ‘flash (once)’ — *žibéti* (*žìba*, *žibḗjo*) ‘shine, sparkle’ (cf. the transitivity-related pair including *sužìbti* above)
***su*-žvìlgti** (*sužvìlgsta*, *sužvìlgo*) ‘id.’ — *žvilgéti* (*žvìlga*, *žvilgḗjo*) ‘id.’
***su*-blìgzti** (*sublỹzga*, *sublìzgo*) ‘id.’ — *blizgéti* (*blìzga*, *blizgḗjo*) ‘id.’
***su*-mìrgti** (*sumìrgsta*, *sumìrgo*) ‘flicker once, start flickering’ — *mirgéti* (*mìrga*, *mirgḗjo*) ‘flicker’
***su*-spùrsti** (*suspùrsta*, *suspùrdo*) ‘start fluttering’ — *spurdéti* (*spùrda*, *spurdḗjo*) ‘flounder, flutter’
***su*-krùsti** (*sukruñta*, *sukrùto*) ‘begin to stir’ — *krutéti* (*krùta*, *krutḗjo*) ‘stir, move’

[11] Verbal pairs like *myléti* ~ *pamìlti* or *žiūréti* ~ *pražiùrti*, where the primary verb exhibits shortening of the long vowel before a tautosyllabic sonorant (a variant of the so-called Osthoff’s Law, see Collinge 1985, 127–132), are not genuine instances of ablaut. In favour of such a position speak the following facts: first, in Type I not a single verb-pair shows this kind of alternation (in *suklìkti* ~ *klỹkti* the vowel is **not** before a sonorant); second, such shortening is observed only with the high vowels *y* /i:/ and *ū* /u:/, which can be shortened without concomitant shifts in quality; cf. the lack of shortening in the pair *norḗti* ~ *panõrti*, where the hypothetical shortened variant would look like **panarti* (cf. *korė* ‘hung’ ~ *karti* ‘to hang’).

Continuation of Table 2

Without ablaut

***pra**-kaĨbti* (*prakaĨbsta*, *prakaĨbo*) ‘speak up’ — *kalbéti* (*kaĨba*, *kalbéjo*) ‘speak’

***su**-čiùlbti* (*sučiùlbsta*, *sučiùlbo*) ‘start chirping’ — *čiulbéti* (*čiùlba*, *čiulbéjo*) ‘chirp’

***su**-klègti* (*sukleñga*, *suklẽgo*) ‘make a hubbub’ — *klegéti* (*klẽga*, *klegéjo*) ‘cackle’

***su-**vìrpti* (*suvìrpsta*, *suvìrpo*) ‘quiver once’ — *virpéti* (*vìrpa*, *virpéjo*) ‘tremble, quiver’

***su**-žvañgti* (*sužvañgsta*, *sužvañgo*) ‘start ringing’ — *žvangéti* (*žvánga/ žvañga*, *žvangéjo*) ‘ring’

***pra**-žvìngti* (*pražvìngsta*, *pražvìngo*) ‘begin to neigh’, ***su**-žvìngti* ‘id.’ — *žvìngauti* (*žvìngauja*, *žvìngavo*) ‘be neighing’ (cf. above the semantically similar type I pair involving ***pra**-žvìngti*)

***pra**-šnèkti* (*prašneñka*, *prašnẽko*) ‘begin to speak’ — *šnekéti* (*šnẽka*, *šnekéjo*) ‘speak’

***pra**-bìlti* (*prabỹla*, *prabìlo*) ‘begin to speak, utter’ — *bylóti* (*bylója*, *bylójo*) ‘say, tell’

***su**-šlámti* (*sušlą̃ma*, *sušlãmo*) ‘begin to rustle’ — *šlaméti* (*šlãma*, *šlamėjo*) ‘rustle’

***su**-čiáukšti* (*sučiáukšta*, *sučiáuško*) ‘begin to chirp’ — *čiauškéti* (*čiáuška*, *čiauškéjo*) ‘chirp’

***su**-brùzti* (*subrũzda*, *subrùzdo*) ‘bestir oneself’ — *bruzdéti* (*brùzda*, *bruzdéjo*) ‘bustle about, fuss; be in a state of ferment’

***pra**-mókti* (*pramóksta*, *pramóko*) ‘learn a little’ — *mókyti* (*móko, mókė*) ‘teach’[12]

***pa**-žìnti* (*pažį́sta*, *pažìno*) ‘know; recognize’ — *žinóti* (*žìno*, *žinójo*) ‘know’

***pa**-gaĩlti* (*pagaĩlsta*, *pagaĩlo*) ‘become sorry’ — *gailéti* (*gaĩli*, *gailėjo*) ‘feel sorry’

***pa**-rũpti* (*parũpsta*, *parũpo*) ‘become anxious’ (impers. with Dat. subject), ***su**-rũpti* ‘id.’ — *rūpéti* (*rũpi*, *rūpėjo*) ‘be concerned’ (impers. with Dat. subject)

[12] This is actually the only verb pair of this morphological type exhibiting a semantic relation close to the causative/inchoative one.

Continuation of Table 2

Without ablaut
***pa**-nõrti* (*panõrsta*, *panõro*) ‘begin to want’ — *norė́ti* (*nóri*, *norė́jo*) ‘want’
***į**-bósti* (*įbósta*, *įbódo*) ‘become tedious’, ***at-si-**bósti*, ***nu-**bósti* ‘id.’ — *bodė́tis* (*bõdisi*, *bodė́josi*) ‘loathe’[13]
***į**-gálti* (*įgálsta*, *įgãlo*) ‘become able’ — *galė́ti* (*gãli*, *galė́jo*) ‘be able, can’
***iš**-giř̃sti* (*išgiř̃sta*, *išgiř̃do*) ‘hear’ (event), ***nu**-giř̃sti* ‘overhear’ — *girdė́ti* (*giř̃di*, *girdė́jo*) ‘hear’ (state)
***pa**-kvaĩlti* (*pakvaĩlsta*, *pakvaĩlo*), ***su**-kvaĩlti* ‘turn stupid’ — *kvailė́ti* (*kvailė́ja*, *kvailė́jo*) ‘grow stupid’ (cf. *kvaĩlas* ‘stupid, foolish’)
***ap**-lẽsti* (*aplẽsta*, *aplẽto*) ‘slow down a bit’ — *lėtė́ti* (*lėtė́ja*, *lėtė́jo*) ‘slow down gradually’ (cf. *lẽtas* ‘slow’)
***ap**-tam̃sti* (*aptam̃sta*, *aptam̃so*) ‘grow darker’ (event) — *tamsúoti* (*tamsúoja*, *tamsãvo*) ‘grow darker’ (process) (cf. *tamsùs* ‘dark’)
***pa**-gar̃sti* (*pagar̃sta*, *pagar̃so*) ‘become famous’, *pragar̃sti* ‘id.’ — *garsė́ti* (*garsė́ja*, *garsė́jo*) ‘resound, be famous’ (cf. *garsùs* ‘famous’)
***pra**-tur̃sti* (*praturs̃ta*, *praturs̃to*) ‘become rich’ — *turtė́ti* (*turtė́ja*, *turtė́jo*) ‘grow rich’ (cf. *tur̃tas* ‘wealth’)
***pa**-grõžti* (*pagrõžta*, *pagrõžo*) ‘to appear beautiful’ — *grožė́ti* (*grožė́ja*, *grožė́jo*) ‘become beautiful’ (*grõžis* ‘beauty’)
***į**-drą̃sti* (*įdrą̃sta*, *įdrą̃so*) ‘become bold’ — *drąsė́ti* (*drąsė́ja*, *drąsė́jo*) ‘grow bolder’ (cf. *drąsùs* ‘bold, courageous’)
***su**-blõgti* (*sublõgsta*, *sublõgo*) ‘become bad’ — *blogė́ti* (*blogė́ja*, *blogė́jo*) ‘grow worse’ (cf. *blõgas* ‘bad’)

Table 3 summarizes the distribution of different types of verbal pairs in my sample. We may again observe that while in Type I causative/inchoative pairs predominate constituting 61% of all such pairs, the reverse is true of Type II pairs: here almost 100% of verb pairs are not correlated according to transitivity. The distinction between Type I and Type II verbal pairs is highly statistically significant (the 2-tail version of Fisher’s exact test yields $p < 0.00001$).

[13] ŁKŽ lists also the non-reflexive variant *bodėti*, synonymous to the more common reflexive one.

Table 3. The distribution of verbal pairs

	'primary' pairs (Type I)	'non-primary' pairs (Type II)		total
		with ablaut	without ablaut	
causative/inchoative	54	—	1	55
other	34	4	39	77
total:	88	44		132

In the next section I will discuss the semantic relationships between the members of verb pairs in more detail.

4. Semantic relationships in the verbal pairs

As we have seen in the previous section, the verb pairs in question clearly fall into two main formally defined types:

Type I: pairs where both verbs are 'primary' and their roots always show different ablaut grades;

Type II: pairs where one of the verbs is a 'primary' *n/st*-verb while the other belongs to a different conjugation type; most of the verbs of this type show no ablaut.

The standard semantic relation between the members of verb pairs in Type I is, as has already been mentioned, inchoative vs. causative, often with a quite straightforward semantic difference, cf. the several following examples[14].

birti 'pour (ITR)' — *berti* 'pour (TR), scatter'

(3) a. *Pro* *plyši-us* *ant* *galv-ų*
through chink-ACC.PL on head-GEN.PL
byr-a *smėl-is*.
pour(ITR)-PRS(3) sand-NOM.SG
'Through chinks sand is falling on their heads.'

[14] This and the following examples, unless specially indicated, are from the Corpus of the Lithuanian Language (LKT).

b. *Pūt-ė* *gūsing-as* *vėj-as,*
blow-PST(3) gusty-NOM.SG.M wind-NOM.SG
bėr-ė *ant* *veid-o* *dulk-es.*
pour(TR)-PST(3) on face-GEN.SG dust-ACC.PL
'A gusty wind was blowing and throwing dust into the face.'

plisti 'spread (ITR)' — *plėsti* 'widen, broaden'

(4) a. *... nes* *juk* *vis-a* *tautosak-a* *taip*
since PTCL all-NOM.SG.F folklore-NOM.SG so
plint-a *iš* *lūp-ų* *į* *lūp-as.*
spread-PRS(3) from lip-GEN.PL in lip-ACC.PL
'... since all folklore spreads in this way — from mouth to mouth.'

b. *Tegu* *j-os* ***pleči-a*** *savo*
HORT 3-NOM.PL.F broaden-PRS(3) poss.RFL
kultūrin-ę *įtak-ą...*
cultural-ACC.SG.F influence-ACC.SG
'Let them broaden their cultural influence...'

plyšti 'tear (ITR)' — *plėšti* 'tear (TR)'

(5) a. *Dunks-i* *vyr-ų* *krūtin-ės,* *nugar-os,*
rumble-PRS(3) man-GEN.PL chest-NOM.PL back-NOM.PL
plyšt-a *balt-i* *marškini-ai.*
tear(ITR)-PRS(3) white-NOM.SG.M shirt-NOM.SG
'Men's chests and backs are rumbling, white shirts are being torn.'

b. *Drebančiom* *rank-om* *vyr-ai*
trembling-INS.PL.F hand-INS.PL man-NOM.PL
plėš-ė *kaklaraiščius...*
tear(TR)-PST(3) necktie-ACC.PL
'With trembling hands the men were tearing off neckties...'

smigti 'pierce (ITR)' — *smeigti* 'stick into (TR)'

(6) a. *T-ie* *žodži-ai* *tarsi* *peil-is*
this-NOM.PL.M word-NOM.PL like knife-NOM.SG
sming-a *į* *mano* *smegen-is.*
pierce(ITR)-PRS(3) in my brain-ACC.PL
'These words thrust themselves into my brains like a knife.'

b. *Pro raustanči-ų klev-ų šak-as*
through reddening-GEN.PL maple-GEN.PL branch-ACC.PL
į dang-ų ***smeig-ė*** *bokšt-ą*
in sky-ACC.SG pierce(TR)-PST(3) tower-ACC.SG
bažnyči-a...
church-NOM.SG
'Through reddening maple branches a church thrust its tower into the sky...'

mišti 'get mixed' — *miešti* 'mix'

(7) a. *Tavo dvasi-a* ***su-miš-o*** *su*
your soul-NOM.SG PRV-get.mixed-PST(3) with
man-qja, kaip vyn-as ***myšt-a***
mine-INS.SG.F like wine-NOM.SG get.mixed-PRS(3)
su tyr-u vandeni-u.
with clear-INS.SG.M water-INS.SG
'Your soul has merged with mine, like wine mixes with clear water.'

b. *... muzik-a nekūnišk-ą prot-o*
music-NOM.SG incorporeal-ACC.SG mind-GEN.SG
energij-ą ***mieši-a*** *kūn-u.*
energy-ACC.SG mix(TR)-PRS(3) body-INS.SG
'... the music mixes with the body the incorporeal energy of the mind.'

lūžti 'break (ITR)' — *laužti* 'break (TR)'

(8) a. *O dabar atėj-au mės-ai mal-ti*
and now come-PST.1SG meat-DAT.SG chop-INF
mašinėl-ės. Mūsų ***su-lūž-o...***
mashine-GEN.SG our PRV-break(ITR)-PST(3)
'And now I have come for a meat chopper. Ours broke...'

b. *Pa-tylėj-o,* ***su-lauž-ė*** *vien-ą,*
PRV-keep.silence-PST(3) PRV-break(TR)-PST(3) one-ACC.SG
kit-ą saus-ą medži-o šakel-ę.
other-ACC.SG dry-ACC.SG tree-GEN.SG twig-ACC.SG
'He kept silence for a while, broke a couple of dry twigs.'

However, there exist a number of cases which most probably historically belonged to the same causative/inchoative type, but where the

erstwhile transparent semantic relationship between the intransitive and the transitive members of the pair has become lexicalized and semantically opaque, cf. the pairs listed in (9).

(9) *rikti* 'make mistakes' — *riekti* 'slice'
gižti 'turn sourish' — *giežti* 'tickle'
klusti 'become obedient' — *klausti* 'ask'
nykti 'disappear' — *niekti* 'despise'
rykšti 'fray; become apparent' — *reikšti* 'mean'
kvipti '(begin to) smell' — *kvėpti* 'inhale, breathe'
lyti (*lyja*, *lijo*) 'rain; soak' — *lieti* (*lieja*, *liejo*) 'pour'

Still in a few other pairs the verbs differ not in syntactic transitivity (resp. semantic causativity) but according to other semantic parameters of transitivity (Hopper & Thompson 1980), such as animacy of the subject, cf. *dvisti* 'have a bad smell, become rotten' (of food) vs. *dvėsti* 'die' (of animals), or control/volitionality on the part of the subject, cf. *klupti* 'stumble' vs. *klaupti* 'kneel', ex. (10).

(10) a. *J-ie* ***klump-a,*** *keli-a-si* *ir* *vėl*
3-NOM.SG.M stumble-PRS(3) raise-PRS(3)-RFL and again
klump-a.
stumble-PRS(3)
'They stumble, rise and stumble again.'
b. *Žmon-ės* ***klaup-ė***, *kėl-ė-si*, *dūsav-o*,
people-NOM.PL kneel-PST(3) raise-PST(3)-RFL sigh-PST(3)
kai *kunig-as* *sak-ė* *pamoksl-ą...*
when priest-NOM.SG say-PST(3) sermon-ACC.SG
'The people went down on their knees, rose, sighed when the priest preached...'

In several pairs the two verbs are close synonyms, e. g., *justi* 'feel' vs. *jausti* 'feel', cf. (11)[15].

[15] Interestingly, though the dictionaries of Lithuanian define *justi* via *jausti* and vice versa, the two verbs show considerable differences in their actual usage. First, *jausti* is overall ca. 10 times more frequent than *justi* (according to LKT). Second, while *jausti* is more frequently used in the present tense than in the past (3791 vs. 1902 occurrences for the 3rd person forms), *justi* demonstrates the opposite preference (179 vs. 393 occurrences for the 3rd person forms). Finally, the fact that prefixes attach almost exclusively to *justi* and not to *jausti* suggests that at least historically *justi* was inchoative rather than stative.

(11) a. *Juk nuolat* ***junt-a*** *Giltin-ę už*
PTCL always feel-PRS(3) Death-ACC.SG behind
nugar-os stov-i-nt.
back-GEN.SG stand-PRS-PA
'He constantly feels Death standing behind his back.'
b. *Tai mat-o ir* ***jauči-a*** *vis-i!*
that see-PRS(3) and feel-PRS(3) all-NOM.PL.M
'Everyone sees and feels this!'

The most common kind of semantic relationship between the members of the non-causative/inchoative 'primary' (Type I) verb pairs is aspectual (or, more accurately, actional, in terms of Tatevosov (2002), or event-related). Most pairs of this kind show a semantic opposition between an atelic (stative or processual) situation denoted by the non-*n/st* member of the pair, and a punctual event, usually the initial point of the corresponding durative situation, expressed by the *n/st*-verb. It must be kept in mind that in this type of verb pairs the inchoative *n/st*-verb normally contains a prefix adding the change of state meaning and often cannot be used without a prefix at all[16]. It is possible to discern several semantic subtypes of such pairs, shown in tables 4–6.

Table 4

Entry into a process	Process
pra*-virkti* 'burst into tears', ***su****-virkti* 'id.'	*verkti* 'weep'
pra*-jukti* 'burst out laughing'	*juoktis* 'laugh'
į*-knibti* 'bury oneself (in work)'	*kneibti* 'work tediously'
su*-tviksti* 'sparkle; begin to shine'	*tvieksti* 'flash'
su*-šukti* 'exclaim, cry out'	*šaukti* 'cry, call'
spisti 'begin to swarm' (of bees)	*spiesti* 'swarm'
su*-stugti* 'begin to howl'	*staugti* 'howl'

[16] Though LKŽ gives non-prefixed variants for many of such verbs, in the contemporary language most of them seem to be obsolete. In favour of this speaks the fact that such unprefixed forms are virtually unattested both in the corpora and in other dictionaries of Lithuanian.

Continuation of Table 4

Entry into a process	Process
***pra**-žvingti* ‘begin to neigh’	*žvengti* ‘neigh’
***pra**-vimti* ‘begin to vomit’	*vemti* ‘vomit’

(12) a. *Staiga j-is **pra-juk-o:** Bent*
suddenly 3-NOM.SG.M PRV-laugh-PST(3) at.least
interjer-as iš-lik-o!
interior-NOM.SG PRV-remain-PST(3)
‘Suddenly he burst into laughter: At least the interior has been left!’

b. *J-i **juoki-a-si** ir verki-a,*
3-NOM.SG.F laugh-PRS(3)-RFL and weep-PRS(3)
tačiau veid-u ne-si-rit-a nė
however face-INS.SG NEG-RFL-roll-PRS (3) not.even
vien-a ašar-a.
one-NOM.SG.F tear-NOM.SG
‘She laughs and weeps, but not a single tear rolls down her face.’

(13) a. *Vis-om spalv-om **su-tvisk-o** pasaul-is.*
all-INS.PL.F colour-INS.PL PRV-shine-PST(3) world-NOM.SG
‘The world began to shine with all colours.’

b. *J-o vidur-ys buv-o rausv-ai*
3-GEN.SG.M middle-NOM.SG be-PST(3) pink-ADV
*mėlyn-as, o pakraščі-ai **tviesk-ė***
blue-NOM.SG.M and edge-NOM.PL shine-PST(3)
įvair-iausi-om spalv-om.
various-SPRL-INS.PL.F colour-INS.PL
‘Its middle was pinkish-blue, and its edges shone with various colours.’

Table 5

Entry into a state	State
***iš**-žirgti* 'stretch one's legs'	*žergti* 'spread (one's legs) wide'
***pra**-džiugti* 'become glad'	*džiaugtis* 'rejoice'
snūsti 'begin to drowse'	*snausti* 'drowse'

(14) a. *... o mokslinink-as kažkodėl be*
and scientist-NOM.SG for.some.reason without
gal-o ***pra-džiug-o****...*
end-GEN.SG PRV-rejoice-PST(3)
'... for some reason, the scientist became infinitely glad...'

b. *Ačiū, aš labai* ***džiaugi-uo-si*** *j-os*
thanks I(NOM) very rejoice-PRS.1SG-RFL 3-GEN.SG.F
sėkm-e...
success-INS.SG
'Thank you, I am very happy about her success...'

Table 6

Instantaneous event	A series of such events
***su-**bilsti* 'knock once loudly'	*belsti* 'knock'
***su**-spigti* 'utter a scream'	*spiegti* 'squeal'
***su**-klikti* 'utter a scream'	*klykti* 'yell'

(15) a. *J-i* ***su-spig-o****,* *dėj-o-si*
3-NOM.SG.F PRV-scream-PST(3) put-PST(3)-RFL
su-pyk-us-i...
PRV-be.angry-PST.PA-NOM.SG.F
'She [suddenly] screamed, pretended to become angry...'

b. *Ir šok-o j-is iš vanden-s, ir*
and jump-PST(3) 3-NOM.SG.M from water-GEN.SG and
spieg-ė *kaip siren-a...*
squeal-PST(3) like siren-NOM.SG

‘And he jumped out of the water and squealed [continuously] like a siren...’

When we turn to the verb pairs of the formal Type II, viz. the ones where the *n/st*-verb is correlated with a non-primary verb, we see that the semantic relationship which is subsidiary in Type I now becomes the standard one: in such pairs, the non-primary verb denotes a state or a process, while the (prefixed) primary verb denotes entry into this state or process. Again, a number of semantic subtypes can be distinguished, summarized in tables 7–11.

Table 7

Entry into a process	Process
***su**-spursti* ‘start fluttering’	*spurdėti* ‘flounder, flutter’
***su**-krusti* ‘begin to stir’	*krutėti* ‘stir, move’

(16) a. *Vyr-ai* *pa-gyvėj-a,* ***su-krunt-a****....*
man-NOM.PL PRV-liven.up-PRS (3) PRV-stir-PRS (3)
‘The men liven up, stir...’

b. *Pūt-ė* *vėj-as,* *judėj-o,* ***krutėj-o***
blow-PST(3) wind-NOM.SG move-PST(3) stir-PST(3)
šak-os, *šnarėj-o,* *siaud-ė*
branch-NOM.PL murmur-PST(3) rustle-PST(3)
lap-ai.
leave-NOM.PL
‘The wind blew, the branches moved, stirred, the leaves rustled.’

Table 8

Entry into a process of emission (of sound or light)	Emission of sound or light
***su**-tviksti* ‘begin to shine’	*tvyksėti* ‘shine, sparkle’
***pra**-kalbti* ‘speak up’	*kalbėti* ‘speak’

Continuation of Table 8

Entry into a process of emission (of sound or light)	Emission of sound or light
***su**-čiulbti* 'start chirping'	*čiulbėti* 'chirp'
***su**-klegti* 'make a hubbub'	*klegėti* 'cackle'
***su**-žvangti* 'start ringing'	*žvangėti* 'ring'
***pra**-gysti* 'begin to sing', ***su**-gysti* 'id.'	*giedoti* 'chant'
***pra**-žvingti* 'begin to neigh', ***su**-žvingti* 'id.'	*žvingauti* 'be neighing'
***pra**-šnekti* 'begin to speak'	*šnekėti* 'speak'
***pra**-bilti* 'begin to speak, utter'	*byloti* 'say, tell'
***su**-šlamti* 'begin to rustle'	*šlamėti* 'rustle'
***su**-čiaukšti* 'begin to chirp'	*čiauškėti* 'chirp'

(17) a. *J-is* ***pra-kalb-o*** *apie laik-ą,*
3-NOM.SG.M PRV-speak-PST(3) about time-ACC.SG
praleist-ą prie Weimar-o prieš pa-tenk-a-nt
spent-ACC.SG near W.-GEN.SG before PRV-get-PRS-PA
į nelaisv-ę.
in captivity-ACC.SG
'He started speaking about the time he had spent near Weimar before he had been imprisoned.'

b. *Aš* ***kalb-u*** *apie labai sen-us*
I(NOM) speak-PRS.1SG about very old-ACC.PL.M
dalyk-us.
thing-ACC.PL
'I am speaking about very old things.'

(18) a. *...ten, virš žali-ų mišk-ų ir*
there over green-GEN.PL forest-GEN.PL and
piev-ų, ***su-tviks-dav-o*** *laum-ės*
meadow-GEN.PL PRV-shine-HAB-PST(3) witch-GEN.SG
juost-os.
band-NOM.PL

'... there, over green forests and meadows, rainbows used to start shining.'

b. *... kuri-ų balt-oji gyvast-is*
which-GEN.PL white-NOM.SG.F.DEF life-NOM.SG
šešėlini-ais siluet-ais laikinai dar
shadowy-INS.PL.M silhouette-INS.PL temporarily still
tvyksėj-o *tams-oje…*
sparkle-PST(3) darkness-LOC.SG
'... whose white life still sparkled in the darkness like shadowy silhouettes...'[17]

Table 9

Entry into a state	State
su*-bruzti* 'bestir oneself'	*bruzdėti* 'bustle about, fuss; be in a state of ferment'
pa*-garsti* 'become famous', ***pra****-garsti* 'id.'	*garsėti* 'resound, be famous'
pa*-žinti* 'know; recognize'	*žinoti* 'know'
pa*-gailti* 'become sorry'	*gailėti* 'feel sorry'
pa*-rūpti* 'become anxious', ***su****-rūpti* 'id.'	*rūpėti* 'be concerned'
pa*-norti* 'begin to want'	*norėti* 'want'
į*-bosti* 'become tedious', ***at-si****-bosti*, ***nu****-bosti* 'id.'	*bodėtis* 'loathe'
į*-galti* 'become able'	*galėti* 'be able, can'
iš*-girsti* 'hear' (event), ***nu****-girsti* 'id.'	*girdėti* 'hear' (state)
pra*-žiurti* 'recover sight, begin to see', ***su****-žiurti* 'start staring'	*žiūrėti* 'look'
pa*-milti* 'grow fond of'	*mylėti* 'love, be fond of'
nu*-nižti* 'become mangy'	*niežėti* 'itch'

[17] http://www.rasyk.lt/kuriniai/95092.html

Continuation of Table 9

Entry into a state	State
***pa**-kabti* 'hang down (ITR)', ***nu**-kabti* 'id.'	*kaboti* 'hang, be suspended'

(19) a. *Man* ***pa-gail-o*** *j-os.*
I(DAT) PRV-pity-PST(3) 3-GEN.SG.F
'I (suddenly) felt pity for her.'

b. ***Gailėj-au*** *j-o* *kaip* *geriausi-o*
pity-PST.1SG 3-GEN.SG.M as best-GEN.SG.M
draug-o.
friend-GEN.SG
'I was feeling pity for him as for a best friend.'

(20) a. *J-ie* ***su-žiūr-a*** *ab-u*
3-NOM.PL.M PRV-look-PRS(3) both-NOM.PL.M
vien-as *į* *kit-ą.*
one-NOM.SG.M in other-ACC.SG
'They both start staring at each other.'

b. *J-is* ***žiūrėj-o*** *daktar-ei* *į* *ak-is.*
3-NOM.SG.M look-PST(3) doctor(F)-DAT.SG in eye-ACC.PL
'He was looking the doctor in the eyes.'

(21) a. ***Pa-nor-au*** *tav-e* *pa-maty-ti.*
PRV-want-PST.1SG you(SG)-ACC PRV-see-INF
'I [suddenly] wished to see you.'

b. .... ***norėj-au*** *maty-ti* *j-uos* *gyv-us.*
want-PST.1SG see-INF 3-ACC.PL.M alive-ACC.PL.M
'I wanted to see them alive.'

Table 10

Entry into a state	Gradual change of state (with denominal verbs)
***pa**-kvailti*, ***su**-kvailti* 'turn stupid'	*kvailėti* 'grow stupid' (< *kvailas* 'stupid')

Continuation of Table 10

Entry into a state	Gradual change of state (with denominal verbs)
***ap**-lėsti* ‘slow down a bit’	*lėtėti* ‘slow down gradually’ (< *lėtas* ‘slow’)
***ap**-tamsti* ‘grow darker’ (event)	*tamsuoti* ‘grow darker’ (process) (< *tamsus* ‘dark’)
***pra**-tursti* ‘become rich’	*turtėti* ‘grow rich’ (< *turtas* ‘wealth’)
***pa**-grožti* ‘to appear beautiful’	*grožėti* ‘become beautiful’ (< *grožis* ‘beauty’)
***į**-drąsti* ‘become bold’	*drąsėti* ‘grow bolder’ (< *drąsus* ‘bold’)
***su**-lysti* ‘to become thin’	*liesėti* ‘gradually become thinner’ (< *liesas* ‘thin’)
***su**-blogti* ‘become worse’	*blogėti* ‘grow worse’ (< *blogas* ‘bad’)

(22) a. *Kiek milijonieri-ų Lietuv-oje ne-galė-tų*
how.many millionaire-GEN.PL L.-LOC.SG NEG-can-IRR(3)
*įrody-ti kaip **pra-turt-o** ir*
demonstrate-INF how PRV-become.rich-PST(3) and
niek-as j-ų ne-klausi-a.
nobody-NOM.SG 3-GEN.PL NEG-ask-PRS(3)
‘How many millionaires in Lithuania won’t be able to demonstrate how they became rich, and nobody asks them’[18].

b. *Miest-as **turtėj-o** net sovietini-o*
city-NOM.SG grow.rich-PST(3) even Soviet-GEN.SG.M
režim-o sąlyg-omis.
regime-GEN.SG condition-INS.PL
‘The city grew rich even under the Soviet regime.’

[18] http://www.lrytas.lt/?id=12034477591202213197&view=9&p=2

Table 11

Instantaneous event	Series of instantaneous events
***su**-žibti* ‘flash (once)’	*žibėti* ‘shine, sparkle’
***su**-žvilgti* ‘id.’	*žvilgėti* ‘id.’
***su**-bligzti* ‘id.’	*blizgėti* ‘id.’
***su**-mirgti* ‘flicker once, start flickering’	*mirgėti* ‘flicker’
***su**-virpti* ‘quiver once’	*virpėti* ‘tremble, quiver’

(23) a. *J-os ak-ys **su-žvilg-o** kaip prieš*
3-GEN.SG.F eye-NOM.PL PRV-flash-PST(3) like before
dvidešimt met-ų.
twenty year-GEN.PL
‘Her eyes flashed like twenty years ago.’
b. *Ak-yse **žvilgėj-o** baim-ė.*
eye-LOC.PL glitter-PST(3) fear-NOM.SG
‘[Her] eyes were glittering with fear.’

Just a single verb pair of Type II shows a causative/inchoative-like relationship between its members, ***pra**-mokti* ‘learn a little’ — *mokyti* ‘teach’:

(24) a. *Be-gyven-dam-as visk-o **pra-mokst-i,***
CNT-live-CNV-SG.M all-GEN PRV-learn-PRS.2SG
***pra-mok-au** ir aš.*
PRV-learn-PST.1SG and I(NOM)
‘During one’s life one learns of everything, and I learned [something], too.’
b. *...Pluton-as, buv-ęs Gelgaudiški-o*
P.-NOM.SG be-PST.PA.NOM.SG.M G.-GEN.SG
*gimnazij-os moksleiv-is, **mok-ė** skaity-ti*
gymnasium-GEN.SG pupil-NOM.SG teach-PST(3) read-INF
ir rašy-ti.
and write-INF
‘Plutonas, the former pupil of the Gelgaudiškis gymnasium, taught [him] to read and write.’

To recapitulate, the verb pairs of this second, non-causative-inchoative, type are defined by the general opposition between an atelic, inherently unbounded, process or state denoted by the member of the pair not belonging to the *n/st*-class, and an *n/st*-verb in most cases furnished with a prefix and denoting an event of entry into this process or state. This semantic opposition is arguably no less basic than the one between intransitive and causative verbs, and it remains rather mysterious why it has so far been largely neglected by scholars studying Lithuanian.

In the next section I will address the question of the rationale behind the coexistence in Lithuanian of these two types of correlative verbal pairs, specifically arguing that the aspectual opposition is derivative from the transitivity-related one.

5. Interpretation and discussion

Given that Lithuanian *n/st*-verbs participate in two semantic oppositions — the one based on transitivity and the other based on actionality — and that both types of verb pairs show formal similarities (cf. *mirkti* 'soak' (ITR) vs. *merkti* 'soak' (TR) on the one hand, and *pravirkti* 'burst into tears' vs. *verkti* 'weep', on the other), the natural question arises of whether the two types of formal and semantic relationships between Lithuanian verbs are purely accidental, or whether it is possible to find a common motivation for them. Below I will present arguments in favour of a unified treatment of both types of opposition and in addition I will outline a plausible diachronic scenario for the rise of the situation observed in Lithuanian.

I believe that the key to understanding this phenomenon is to be sought in the stable uniformity of the one side of both oppositions, viz. in the fact that one of the members of the pair in both types is always an intransitive primary verb with an *n/st*-present. These verbs serve both as intransitive counterparts to the transitive members in the causative-inchoative pairs and as punctual members of the aspectual pairs. It is well known (see the references in section 1) that the *n/st*-class of Lithuanian primary verbs is semantically rather homogeneous and mostly comprises predicates denoting uncontrolled changes of state. Such a change of state can be either gradual (or: incremental,

Krifka 1989, Rothstein 2004) or punctual. There is a weak correlation between the kind of event denoted by an *n/st*-verb and the type of opposition it participates in. The incremental verbs denoting gradual changes of state normally participate in causative/inchoative pairs; their transitive correlates then denote a controlled activity aimed at a gradual attainment of such a change of state (cf. *linkti* vs. *lenkti* 'to bend'). By contrast, *n/st*-verbs denoting spontaneous, punctual changes of state normally do not enter into causative/inchoative pairs, cf. *alpti* 'faint' or *mirti* 'die'[19].

The semantic link between the uncontrolled gradual telic process leading to a change of state of the subject, on the one hand, and the spontaneous punctual event of an entry into a new state or process, on the other, is a natural consequence of the generalization and extension of the semantic prototype of the *n/st*-class once it became applicable to a large body of semantically heterogeneous verbs. Already among the *n/st*-verbs participating in the causative/inchoative pairs there are such that do not necessarily imply lack of control on the part of their subjects, cf. *kilti* 'to rise', which is compatible not only with inanimate subjects such as sun or temperature, cf. (25a), but also with animate subjects (Temčin 1986, 92, 94, *pace* Stepanov 1978, 337), cf. (25b).

(25) a. *Pro debes-is* ***kil-o*** *apval-i*
through cloud-ACC.PL rise-PST(3) round-NOM.SG.F
raudon-a saul-ė.
red-NOM.SG.F sun-NOM.SG
'Through clouds the round red sun was rising.'

b. *Pa-link-ę į priek-į,*
PRV-bend-PST.PA.NOM.PL.M in front-ACC.SG
ram-iu ir neskubr-iu kaln-ų
quiet-INS.SG.M and unhurried-INS.SG.M mountain-GEN.PL
gyventoj-ų žingsni-u mes tolygiai ir
inhabitant-GEN.PL pace-INS.SG we:NOM evenly and

[19] This is certainly not an exceptionless rule, but rather a tendency. There are both *n/st*-verbs denoting non-incremental changes of states for which there is a causative counterpart of Type I, cf. *lūžti* 'break' (ITR) ~ *laužti* 'break' (TR), and verbs of (at least potentially) gradual change of state participating in the aspectual pairs of Type II, cf. denominal degree achievements (Dowty 1979) of the type *pakvailti* 'turn stupid' ~ *kvailėti* 'gradually grow stupid'.

tylė-dam-i ***kil-o-me*** *į viršų.*
keep.silence-CNV-PL.M rise-PST-1PL upward
'Leaning forward, at the still and unhurried pace of mountain dwellers, we were evenly and silently going uphill.' (LKT)

Thus, the semantic component 'lack of control on the part of the subject' becomes subsidiary and optional with *n/st*-verbs, while the inherent telicity feature, which can be foregrounded by the prefix, assumes the principal role. The existence of prefixal derivatives of the intransitive members of the causative/inchoative pairs denoting entry into the relevant state, like ***pa**-linkti* 'bend down', ***iš**-birti* 'pour out', ***pra**-driksti* 'get torn', ***su**-rigzti* 'become entangled', ***į**-smigti* 'pierce into', must have facilitated the extension of this inflectional model to verbs like ***pra**-virkti* 'burst into tears' or ***pa**-milti* 'grow fond of'. Indeed, all such prefixal formations belong to the same actional class of punctual verbs and denote the same type of situation, viz. a punctual transition (in terms of Pustejovsky 1991; see Arkadiev 2011 on the interpretation of the traditional 'aspectual' distinctions of Lithuanian verbs in terms of eventuality types). The feature 'lack of control' is optional here, too, cf. numerous verbs of emission and speech such as ***pra**-šnekti* 'start talking', which clearly denote volitional controlled events.

There is also cross-linguistic evidence in favour of the non-accidental nature of the similarity between causative/inchoative and punctual/durative verbal pairs in Lithuanian. That anticausative and inceptive/ingressive meanings can be expressed by similar morphology is not unprecedented. Such semantic syncretism is found, among other non-trivial morpholexical parallels to the Lithuanian system (see Arkadiev 2006b; 2008), in Georgian (see, e. g., Vogt 1971, 112–113; Holisky 1980, 1981), where the same morphological model (the so-called *d*-passive) is employed to mark both passive and anticausative derivatives of (telic) transitive verbs (26a) and inchoative derivatives of atelic intransitive verbs (26b,c).

(26) a. causative — inchoative: *atetreb-s* 'makes white' — *tetr**deb-a*** 'becomes white'
b. atelic process — entry into a process: *t'ir-is* 'cries' — *at'ir**deb-a*** 'begins to cry'

c. state — entry into a state: *civ-a* 'is cold' — *aciv**deb-a*** 'becomes cold'

Finally, I believe it is possible not only to establish a synchronic semantic link between the two types of verbal pairs in Lithuanian, but also to a certain extent reconstruct their diachronic development. Certain features of the Type II pairs suggest that they are younger relative to the Type I causative/inchoative pairs (see also Arumaa 1957, 129ff for a more detailed discussion). These features, which are consistently absent from Type I pairs, include:

- the lack of ablaut in most of the pairs;
- the fact that extra-heavy stem syllables containing a diphthong or a long vowel followed by a tautosyllabic sonorant, which are otherwise unacceptable in Lithuanian primary verbs, are possible in Type II verbs, cf. *pa-g**ail**-ti*, *pa-n**or**-ti* 'to start wishing' vs. *p**uol**a* 'is falling' ~ Inf *p**ul-ti***, not **p**uol-ti*, with a short vowel instead of the diphthong, or *k**or**ė* 'was suspended' ~ Inf *k**ar**-ti* with the shortening /o:/ > /a/[20];
- the existence of clearly denominal formations such as *ap-tamsti* 'grow darker' < *tamsus* 'dark' (see Hofmann 1956 for an extended list of denominal inchoative *n/st*-verbs);
- the existence of verbs actually based on morphologically complex formations, e. g. *pra-tursti* 'become rich' < *tur-t-as* 'rich' < *turėti* 'have, hold';
- the existence of dialectal verbs based on recent Slavic borrowings, e. g., *bagosti* (Pres. *bagosta*) 'become rich' < *bagotas* 'rich' < Belorussian *bahaty* (Arumaa 1957, 129).

All these facts, together with the considerably lesser degree of expansion of the *n/st*-verbal class in Latvian (Arumaa 1957, 125ff), strongly suggest that Type II verb pairs showing an actional relation

[20] In addition to that, the metatony involving the change of the root toneme from acute to circumflex (the so-called *métatonie douce*), which is a Lithuanian innovation (Derksen 1996, 166–167) is attested more often with verbs of Type II (cf. ***su**žvañgti* 'start ringing' — *žvánga* 'rings', ***su**čiaũkšti* 'begin to chirp' — *čiáuška* 'chirps', ***pan**õrti* 'begin to want' — *nóri* 'wants') than with verbs of Type I (the only example in my data is *nỹkti* 'disappear' — *níekti* 'despise' with an opaque semantic relationship). I thank an anonymous reviewer for pointing out this criterion to me.

between members are a secondary development as a result of a diachronic extension of the Type I causative/inchoative pattern. Most probably, the prefixal punctual intransitives like *pa-linkti* 'to become bent' served as the basis for this extension.

I wish to conclude my paper with an observation relating to the status of the two types of verbal oppositions in Lithuanian from the point of view of morphological theory. The extension of the formal model of the causative/inchoative opposition to other semantic types of verbs and the concomitant generalization of the *n/st*-class to a wide range of predicates expressing changes of states has led to a considerable shift in the morphological relationships between different verbs based on the same root. While the members of Type I causative/inchoative pairs are linked by multiple *bidirectional* relations pertaining to their inflection class, root vowels/ablaut grade, transitivity, and semantics[21], the relations among the members of the Type II aspectual pairs are largely *unidirectional*. Here, verbs of different inflectional classes (including those with derivational suffixes), provided they have suitable semantics (denoting states and atelic processes), are inserted into the formal model of a prefixal *n/st*-verb expressing what can be roughly called "the most natural event associated with the situation expressed by the base".

Theoretically speaking, we observe a shift from a morphological *derivation* conceived of as an operation with clearly defined source and target entities and uniquely determined in terms of changes at the levels of morphology (inflection class and ablaut grade), syntax (intransitive vs. transitive), and semantics (inchoative vs. causative), to a morphological *construction* (in a broader sense of this term adopted in Construction Grammar, cf. Goldberg 2006, and Construction Morphology, Booij 2007; 2010). In case of the punctual/durative verb pairs we

[21] Note that I remain agnostic as to the direction of the relationship between transitive and intransitive verbs in the causative-inchoative alternation, either synchronically or historically. As an anonymous reviewer points out, it is possible that the inchoative members of this opposition are secondary with respect to the transitive verbs, being actually back-formations based on the ancient and now obsolete past passive (resultative) participles with the "weak" ablaut grade (cf. Kuryłowicz 1956, 293): *kelti* 'raise' → past passive participle *kiltas* 'raised, risen' → intransitive verb *kilti* 'rise', with *kiltas* supplanted by *keltas*. It must be noted, however, that this historical scenario does not have much bearing on my argument concerning the other type of verbal opposition involving *n/st* verbs.

are dealing with a morpholexical operation lacking a clearly defined set of source entities (its 'input' is restricted only semantically), while its target domain has a characteristic 'radial' structure consisting of a heterogeneous set of minor verbal classes interrelated by semantic links. The target set is not formally unified, either (at least, not to the degree of unification observed with the causative/inchoative pairs), in particular in the heterogeneity of possible root vowels and syllable structures. Thus, *n/st* verbs entering Type II pairs allow any root vowels, e. g., /a/ *pak**a**bti* 'droop', /o:/ *pram**o**kti* 'learn a little', including diphthongs, e. g., /au/ *sučiaukšti* 'begin to chirp', and otherwise banned extra-heavy syllable nuclei, e. g., *pan**or**ti* 'begin to want'. By contrast, the syllable structure and root vocalism of the *n/st*-members belonging to Type I is rigidly constrained by the regular ablaut patterns. In addition to that, the semantic and formal subcategories of this class do not always correlate with each other (e. g., verbs denoting sound emission may belong both to Type I and to Type II oppositions, cf. Type I *su-spigti* 'utter a scream' — *spiegti* 'squeal' vs. Type II *su-klegti* 'start to cackle' ~ *klegėti* 'cackle').

It is important that the target set is defined not in terms of *dynamic operations* applied to the source entities, but rather in terms of *static constraints* which a member of this set must satisfy. A punctual verb in a Type II opposition must have a prefix, belong to a particular inflectional class and denote an instantaneous event. The way these requirements are satisfied in each particular case may be quite diverse. On the morphological level this involves such operations as truncation of stem-forming thematic vowels (e. g., *šlamėti* → *su-šlamti*) and even derivational suffixes (e. g., *tamsuoti* → *ap-tamsti*), change of inflection class, vowel shortening, rarely ablaut. On the level of semantics, a durative situation must become a punctual event, which requires either profiling the initial phase of the situation or focusing on one of its elementary parts (when the source verb denotes a multiplicative process segmentable into identical 'quanta', see, e. g., Table 11). It is not possible to come up with a well-defined and once and for all established set of *operations* which would derive *n/st*-members of Type II verbal pairs in Lithuanian, but the *constraints* on the formal and semantic makeup of these verbs are much more straightforward.

To sum up, the complex relationships between inchoative *n/st*-verbs in Lithuanian and their morphological counterparts, either transitive or intransitive, allow for a principled account in terms of synchronic semantics and diachronic changes, and present an interesting and typologically non-trivial case of extension from a transitivity-related morphological opposition to the domain of eventuality types, with implications both for the theory of lexicon and for contemporary constructional approaches to morphology.

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Abbreviations

ACC — accusative, ADV — adverbial, CNT — continuative, CNV — converb, DAT — dative, DEF — definite, F — feminine, FUT — future, GEN — genitive, HAB — habitual, HORT — hortative, INF — infinitive, INS — instrumental, IRR — irrealis, ITR — intransitive, LOC — locative, M — masculine, NEG — negation, NOM — nominative, PA — active participle, PL — plural, POSS — possessive, PRS — present, PRV — preverb, PST — past, PTCL — particle, RFL — reflexive, SG — singular, SPRL — superlative, TR — transitive

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