CIRCUMFIXED CAUSATIVES IN RUSSIAN AND POLISH:
A ROOT-BASED ACCOUNT

Abstract. This paper is aimed at explaining an unexpected adverse relationship of circumfixed causatives and synthetic anticausatives based on the same roots in Slavic languages, on the example of Russian and Polish. We have opted for the root-based construction model of verbal morpho-syntax, as it creates the theoretical mechanisms capable of accounting for this difference. Causatives and anticausatives are topped with distinct Voice heads, which cannot co-occur in a single form. As the heads are prefixal elements, differently prefixed distinct Voice forms are predicted by the model.

Keywords: causative, anticausative, Voice, root-based morphology, Slavic.

1. SLAVIC CAUSATIVES
IN GENERATIVE MORPHOLOGY

The causative formation, or, more generally, processes increasing the valency of verbs are considered to be quite minor, if not non-existent morpho-syntactic rearrangements in Slavic languages (see e.g. Haspelmath 1993; Nichols 1993, 2004). This view stems from the lexicalist generative tradition, in which morphologically complex verbs have been treated as derived from more basic lexical items, which constitute words in the lexicon of a given language. To justify the claim that a causative verb has been derived, one has to pinpoint a morphologically simpler word, e.g. an unaccusative verb, on which the complex causative verb could be based. As such a perspective has been adopted within the prevailing generative theory, in Slavic languages few causative verbs could be identified and no rules

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deriving them from simpler forms have been proposed. Exceptions to such an approach could be found within Generative Semantics (see e.g. Lakoff 1965/70; Dowty 1972; McCawley 1976; Olszewska 1986), as the representatives of this particular brand of generativism based their structures not on lexical words, but on semantic primitives. Other generativists would maintain that causatives remain at best in the equipollent relationship with their inchoative counterparts, so the question whether they should be treated at all as derived would remain unanswered (see e.g. Szczęśniak 2008; Rościńska-Frankowska 2012). However, the very taking of a different theoretical perspective proves, time and again, that new facts about language can be unearthed; a non-lexicalist view upon the verbal system of Slavic languages allows us to discover quite new interrelations among verbal forms and significantly broadens the class of forms that can be treated as derived.

The framework in which we are going to work here is that of the root-based and structure oriented morphology (see e.g. Arad 2005; Pykkänen 2008; Alexiadou and Anagnostopoulou 2004; Embick 2004, 2009; Alexiadou 2010; Alexiadou and Doron 2012; Lomashvili 2011; Doron and Labelle 2011), which constitutes one of the developments within Distributed Morphology. In this particular approach roots are perceived as category-less lexical entities and the derivation proceeds from the root, building a form from scratch, while merging consecutive layers of structure. No simpler lexical forms have to participate as steps in this derivation. A justified number of functional projections constitutes the only upper bond to the complexity of a morpho-syntactic structure. Relations among morpho-syntactic forms are coded by shared portions of structure and by identical roots, and not on the basis of the surface, formal similarity of the resulting lexemes. Consequently, the forms which are morphologically complex, but which do not possess clear bases in the lexeme based models of morphology, are seen as derived through merge in the root-based approach. As we will show in this paper, the root-based approach throws a new light on the relationships (or their lack) in the causative-anticausative morpho-syntax of Slavic languages.

Slavic causatives have largely escaped the attention of generative linguists precisely because they lacked convincing basic forms. Once we free ourselves of such preconceptions, they figure as a significant class of forms in the Slavic morpho-syntax.
The presence of causatives in the Slavic morpho-syntax has not gone quite unnoticed. For instance Nichols (1993) mentions the fact that Slavic languages preserve some remnants of once productive morphological anticausative/causative pattern. The examples coming from the medieval Slavic lexicon are analytic anticausatives/unaccusatives formed with the vowel -ē- from a hypothetical Indo-European root: *sēd-ē- ‘sit’, as well as causatives formed with the vowel -ī- and o-grade root: *sād-ī- ‘set, plant’. This pattern is no longer productive in the sense of introducing significant numbers of newly derived verbs (see e.g. Gorbachov 2007), but a residue of this mechanism can be still discerned in the form of the causatives which have the -i- stem-forming vowel, while -e- characterizes unaccusatives (which we will refer to as synthetic anticausatives to stress their morphologically complex character). Some examples of such forms will be quoted in the next section to serve as the basis for an analysis of Slavic causatives within the chosen model.

2. RUSSIAN AND POLISH CIRCUMFIXED CAUSATIVES

Both in Russian and in Polish a great number of morphologically complex verbs with causative semantics and similar morphological exponents can be found. By causative semantics we mean the meaning where a change of state caused by an external Agent is asserted for an internal argument. Like in Old Church Slavonic, these verbs are characterized by the presence of the verbal stem forming vowel -i- (OCS ras-toc-i-tǔ ‘to scatter sth.’) and, typically, by a prefix, which sometimes can be the morphological zero.

Some Russian and Polish unprefixes examples are supplied in (1) below, preceded with the corresponding synthetic anticausatives, to underline the semantic complexity of causatives:

1. a) Russian

b) Polish

However, a number of such pairs is limited and the data like the ones above create a false impression that the class of causatives and synthetic anticausatives in Slavic languages is very limited. The situation looks much different if we consider the causative verbs which are created from roots with the addition of a prefix and the -i- suffix. We will refer to this complex as a circumfix, as for all practical purposes it is a circumfix, though the Slavic linguistic tradition describes the suffixed vowel as a stem forming vowel, while the prefix is perceived as a perfectivizer. Occasionally only the suffix is added (as in 1 above), but we will assume, for the regularity of the pattern, that in such cases we deal with the zero prefix. Characteristically, however, two elements are added at the same time. We have chosen here for the purposes of exposition a few such prefixes as parts of the circumfixes, but the list is not exhaustive:

2. Circumfixed causatives in Russian and Polish

a) Russian

perëkrestit’ ‘cross’, perëgorodit’ ‘put up a divide’, perëplodit’ ‘put up a fence’;
smyslit’ ‘understand’, skručevit’ ‘twist’;
rasstranžirit’ ‘squander’, raspadalit’ ‘toule’, raspuštit’ ‘fluff, open’, rasčislit’ ‘calculate’;
okružyit’ ‘surround’;
primirit’ ‘make peace’, etc.

b) Polish:

przyzwyczaić ‘make used to’;

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1 See Jakobson (1948), Schenker (1954).
2 Olszewska (1986: 78–82) and Wróbel (1984: 503–504) enumerate a number of prefixes with the suffixal element -i/-y-. Such complexes will be referred to here as a circumfixes. The prefixes are: do-, na-, o-, ob-, od-, po-, prce-, przy-, roz-, u-, wy-, z-, za-. Nichols (2004) mentions such prefixes for Russian: za-, pod-, per-, pri-, s-, ras-, ot-, it-.
3 The prefixes and the suffix are given here in bold characters.
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The examples above constitute just an illustration of the existence of a numerous class of causative verbs formed in the way specified above. The basic questions that have to be tackled at this point within a structure-dependent view upon morpho-syntax are those concerning the place(s) in the verbal structure that the prefixed and suffixed morphemes occupy as well as the semantics of the verbs, and their relation to other forms based on similar structures.

3. A CONSTRUCTION-BASED ANALYSIS

The structure for the causative verbs in Slavic that we will propose here will be based on their semantic properties, their behaviour in a clause, as well as on their distribution with respect to other forms based on identical roots. We will take into account the general guide-lines concerning the problem how the Distributed Morphology views the verb structure (e.g. the claim that the active voice projection introduces the external argument in its specifier), but we will develop our own justification for particular structural elements.
3.1. CRITERIA FOR RECOGNIZING CAUSATIVE VERBS

First of all we will show that the verbs are really characterized by causative semantics. As such, they will possess in their structures external arguments. To demonstrate that, we have adopted some tests suggested by various authors dealing with causatives. For instance Van Valin (2013) maintains that the causative semantics of verbs manifests itself through structures in which such verbs may appear. As causation involves two events: the causing event and the state event, then a certain separation of these events should be possible, unlike with simple transitive verbs which are mono-evental. Thus the Agent participant and the instrument participant can be conceptualized in the case of transitive verbs as powers bringing about causation. In other words causative verbs open semantic vistas for instruments to be treated as participants in the causation situations. Therefore, causative verbs are allowed in the sentences where the instrument replaces the true Agent:

3.3. Causative Verbs

a) Malčiki peregrodili dorogu povelennymi derevjami. ‘The boys have barricaded the road with fallen trees.’ vs. Dorogu peregrodili povalenneje derevja. ‘Fallen trees have barricaded the road.’

b) Ded sahar ložkami est. ‘The old man eats sugar with spoons’ vs. *Ložka est sahar. ‘A spoon eats sugar’

3.4. Polish

c) Chłopcy przegrodzili drogę powalonymi drzewami. ‘The boys have barricaded the road with fallen trees.’ vs. Drogę przegrodziły powalone drzewa. ‘Fallen trees have barricaded the road.’

d) Starzec je cukier Łyżkami. ‘The old man eats sugar with spoons’ vs.*Ltżka je cukier. ‘A spoon eats sugar’

Of course in the case of so selected verbs, the question arises whether the ungrammaticality of the sentences in 3 b) is not due to the violation of the selection restrictions that the verb imposes, as the action of eating involves an animate participant. It is not clear though whether this should make a
difference if the verb was causative, and so bi-evental. In such a case the morpho-syntactic structure would contain two virtual predicates. Then the cause introducing predicate would not refer to the action of eating itself and thus it would not have to induce the animacy requirement upon the subject. As such limitations hold, then the structure in 3 b) is not grammatical and, as a result, we may assume – non-causative.

Also other tests are available, which uphold the causative status of the discussed verbs. For instance Embick (2009) proposes that caused states are intimately connected with causative verbs and such states can appear only in certain structures. One such structure is the predication with the copulative be, the other the predication modified by the still adverb. We adopt his tests in such a way that on the basis of the grammaticality of the structures with caused states we will draw conclusions as to the causative nature of the related verbs.\(^5\) It has to be borne in mind that Russian does not realize the be copula in the present tense, so the relevant sentences are devoid of the overt copula:

4.

**Russian**

a) *On zakrugljonnyj, pravilno?* ‘It is rounded, right?'

b) *I sovsem, sovsem my zabyli, čto Anton vce eše zakluchenjy.* ‘And we have forgotten completely that Anthony is still locked up.’

**Polish**

a) *Obraz widziany przez pacjenta z zaćmą jest zamglony.* ‘The picture of a patient with cataract is covered with fog’

b) *[...] w którą stronę nie pójdiesz to widzisz ciągle zamglony horyzont.* ‘Which way you would not go, you still see the horizon covered with fog.’

Still some more tests are made available by MacDonald (2008), who notes that causatives (as accomplishments), when modified by *almost*, give two different readings. One is counter-factual, the other—ineffective. And finally, Dowty (1979) notices that the clause with a causative verb, when modified by *again*, shows two interpretations—repetitive and restitutive. The two possibilities of modification are connected with the bi-evental structure of causatives, in which each event can be modified separately. When the causing sub-event is modified by *almost*, then the counterfactual meaning is obtained; when the result is so modified, then the incomplete meaning results:

\(^5\) The examples come from the *National Corpora of Russian and Polish.*
5.

Causatives + almost

Russian

a) Vy menja počti uspokoiši, budu prodožit [...]’ pokupat ‘You have almost calmed me down. I will still buy [...]’ (incompletive)
b) žizn’ moja razbita, počti uničožena, i ja ee vnov’ sebe vozvrashaju ‘My life is broken, almost annihilated, and I again return myself to life’ (counterfactual)

Polish

a) Polo, który prawie podwoił wynik z ubiegłego roku (+96,8 proc.). ‘Polo, who almost doubled the result from the previous year (+96.8)’ (incompletive)
b) Ja prawie poślubilem pewną baletnicę, w Londynie. ‘I have almost married a certain balet dancer, in London.’ (counterfactual)

6.

Causatives + again

Russian

a) Pervyj kanal, kstati, snova udivil vseh. ‘Channel One, accidentally, has surprised everyone.’ (repetitive)
b) Starik, kazalos, otkryval glaza i prihodil v negodovanie; no čerez čas ljubov snova oclepljał ego. ‘The old man, it seemed, would open his eyes and feel mistreated, but in an hour love blinded him again’ (restitutive)

Polish

a) Zatopioną z jego winy ziemię Mądrość znowu ocaliła. ‘Wisdom has saved the earth which has been sunken because of him’ (repetitive)
b) [...] poślubił Juttę Ilsę Zambonę, z którą się rozwiódl w 1930, a następnie znowu poślubił w 1938. ‘He married Jutta Ilse Zambona, whom he divorced in 1930, and then married again in 1938.’ (restitutive)

The tests specified above allow us to distinguish causative verbs from other transitives in no uncertain way. In the next sub-section we will concentrate on the morpho-syntactic structure of causatives.

3.2. THE STRUCTURE FOR CAUSATIVES

So defined causatives have their external arguments introduced in the specifier of the Voice Phrase (see Marantz 1984; Pyłkkanen 2008). Thus the appearance of the external argument is the property of the structure they
enter, and does not encroach on the specificity of the roots. In other words, the specific nature of the argument (Causer), which does not have to be an Agent, as is the case with other transitive verbs, does not result from the properties of the roots, but has to be a concomitant of the causative structure. We propose that the structure of causatives resembles the structure offered in Embick (2009). The structure supplies a projection from which the change of state is to be read (level 1 in fig. 7). If verbs with such a substructure are topped with the active voice projection, then causative verbs arise. If, on the other hand, they are supplemented by the non-active voice head — then the proposition is interpreted as a change of state or state itself (depending on the position of the root in the structure — see Malicka-Kleparska 2014b). The non-active heads do not introduce external arguments in their specifiers, the surface subjects are raised internal arguments. Thus the inchoative and stative propositions are not treated in the semantic component as bi-evental, while causatives are (the Voice Projection introduces an additional argument).

7.

Let us now argue in greater detail for the structure in (7).

The most spurious point of the structure is the suggestion that the prefixes are heads of the Voice Phrase. In various treatments of the Slavic morphosyntax they are believed to be lexical prefixes realizing resultative meaning or lexical aspect (see Svenonius 2004, MacDonald 2008). We, however, want to claim that the perfective meaning is a by-product of the fact that these prefixes are marked with the Maxe requirement (see Filip 2013, and its application to Polish in Malicka-Kleparska 2014a), while their place in the structure is justified by the fact that they introduce the external causer arguments and they do not appear in anticausatives.

Filip (2013) claims that the elements that secure the realization of the perfective aspect in languages of the world share an operator, called Maxe, (maximization operator of events), which imposes the Maximal Stage Requ-
rement on semantic structures: out of all available event interpretations, the one which is semantically the richest must be selected. In Slavic languages the operator is associated with perfectivizing prefixes. So, in order to mark a form as perfective, a given prefix does not have to be introduced in the structure in the projection on purpose devoted to the aspectual marking: The perfective aspect may be read off a formative that appears in another structural position, but is marked for the Maximal Stage Requirement. This element of our analysis at this point is just a conjecture. Below we introduce the data that seem to support our mode of thinking.

Since our prefixed verbs possess causer external arguments, as shown in (3,4,5,6), this very fact already suggests that the place of the prefix is in the head of the Voice phrase. We might speculate, however, that some other morphological element conditions the appearance of the active voice projection, for instance a hypothetical zero affix.

However, there exists interesting evidence in favor of treating the prefixes as heads of the Active Voice Phrase: An inverse relationship obtains between -e- anticausatives and circumfixed causatives, which need not exist if the prefixes were just perfectivizers. As it is, both Russian and Polish prefixed causatives do not possess synthetic anticausative counterparts prefixed in the same way as they are. This fact has been observed, albeit without a reflection going any further, by Nichols (2004: 70) for Old Church Slavonic and Russian. She gives examples of synthetic anticausatives and causatives in Russian and notices that the available prefixing methods do not coincide. So the unaccusative *u-cêlêt’ ‘survive’ has no corresponding causative *u-cêlit’, while with the general meaning of ‘heal’ the Russian causative may be prefixed with na-, pri- and is-. Below we quote an example from Nichols (2004: 70):

8. Old Church Slavonic anticausatives vs. causatives

krêpêti ‘strengthen, INF’ vs. krêpiti, strengthen someone, INF’

Russian anticausative:
non-existent

Prefixes Russian causatives (with various meanings connected with strengthening something)
za-krepi’t, pod-krepi’t, pere-krepi’t, pri-krepi’t, is-krepi’t, ras-krepi’t, u-krepi’t

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6 She bases her table on Zaliznjak (1977).

7 We have not been able to confirm the relevant forms for Present-day Russian, though.
Both in Russian and Polish the regularity still holds: synthetic anticausatives and causatives are not prefixed in the same way, although they are based on the same roots and have related semantics. We have conducted an in depth analysis of prefixation phenomena for Polish and Russian and found out that the cases where prefixes coincide for -e- anticausatives and -i- causatives are quite isolated. For Russian forms prefixed with za-, pod-, pere-, pri-, s-, ras-, o-, u-, the only exceptions entered in Slovar morfem russkogo jazyka (1986) and Slvoobrazovatelnyj slovar russkogo jazyka (1985) are: zaplesnevet' ‘become moldy’, peregoret’, podgoret’, ugoret’, otgoret’ pri-goret’, sgoret’, rasgoret’ - all based on the same root and having variety of meanings which oscillate around the meaning of ‘burn’.

The lack of corresponding prefixed synthetic anticausatives cannot be explained phonologically, as all sequences are admissible, just merely non-existent. E.g. in Polish ?nadziwaczeć, ?rozdziwaczeć, ?udziwaczeć, ?adziwaczeć, sound perfectly plausible.

There are also no semantic limitations that would preclude the formation of such anticausatives, as the prefixes appear with ‘reflexive’ anticausatives formed with the reflexive-like formants: suffixal -sje in Russian and clitic się in Polish, e.g.:

a) Russian prefixed –sja anticausatives

b) Polish prefixed się anticausatives

8 The verbs probably constitute analogical formations as they cluster around a single root and semantics.
9 It has to be stressed, however, that some prefixes can appear with synthetic anticausatives in the function of pure perfectivizers (Łazorczyk 2010), i.e. such forms that bring about the change of aspect, and have no causativizing function. For instance, although ?roz-czerwienieć is non-existent, s-czerwienieć ‘grow red, PERF’ has been attested as the perfective of czerwienieć ‘grow red’.
10 There may arise a suspicion that the reflexive anticausatives block the appearance of the non-reflexive ones in Slavic languages, and to a certain extent such an adverse relationship may
Therefore, the lack of correspondence of anticausative prefixes and causative prefixes in Russian and Polish cannot be attributed to morphotactics or semantics and the gap must have something to do with the structure of the forms we consider in this text.

We attribute the discrepancy in the distribution of the prefixes to two distinct Voice heads – Active Voice head for causatives, and non-Active Voice head – for anticausatives, which are incompatible with each other. Synthetic anticausatives are formed with the zero formative realizing the Voice head, which can be supplemented with a pure perfectivizer (in the form of an appropriate prefix) in a higher projection (Viewpoint aspect—see Łazorczyk 2010). Causatives are formed with the Active Voice head, which is formed by the respective prefixes – added lower in the derivation.

This analysis is corroborated by facts connected with the distribution of overt internal arguments with causatives, which are required if prefixes are introduced in the lower projection – Voice Phrase, where they can influence the event structure of the proposition (see Malicka-Kleparska 2014b), but such requirement of the overt realization of internal arguments does not obtain if prefixes head the Viewpoint Aspect – a high projection in verbal morpho-syntax.

4. CONCLUSIONS

In such Slavic languages as Russian and Polish we may observe a very strong tendency of causatives and syntactic anticausatives to be differently prefixed. This tendency can be accounted for if we adopt the root-based model of morpho-syntax, in which causatives and anticausatives are derived as separate groups of verbs (and not from each other). These groups of verbs are topped by different Voice projections – one Active – for causatives, and non-Active – for anticausatives. The heads of these projections are distinct prefixal elements and thus the prefixed forms do not coincide.

Exceptions to the above generalization are not numerous and can be explained in terms of analogy, as they cluster around few specific roots.

This adverse relationship of causatives and anticausatives could be difficult to explain within a lexeme based derivational model of morphology, appear. But buy and large both classes of anticausatives may appear side-by-side—see e.g. Malicka-Kleparska 2013.
as it bears on the distribution of forms that have partially similar semantics and very similar forms, and consequently should be connected by a derivational rule.

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**KAUZATYWA CYRKUMFIKSALNE W ROSYJSKIM I POLSKIM**

– PODEJŚCIE OPARTE NA RDZENIU

**Streszczenie**

W artykule próbujemy wyjaśnić tajemniczy brak zgodności między prefiksacją kauzatywów i antykauzatywów w językach słowińskich na przykładzie rosyjskiego i polskiego. Posługujemy się modelem morfo-syntaktycznym opartym na rdzeniu wyrazowym, w którym poszczególne typy czasowników nie są derywowane z siebie wzajemnie, a raczej poczynając od rdzenia. Taki model pozwala nam wyjaśnić wzajemnie wykluczającą się dystrybucję prefiksów w przypadku badań czasowników. Czasowniki kauzatywne mają w swojej strukturze prefiks strony czynnej, podczas gdy antykauzatywa – strony nieczynnej. Ta różnica w budowie zapewnia brak odpowiedniosci odnawialnych czasowników.

W bardziej tradycyjnym podejściu do derywacji czasownikowej, gdzie jeden czasownik jest wywodzony od drugiego, taki brak odpowiednich form jest trudny do wyjaśnienia, ponieważ czasowniki kauzatywne i antykauzatywne zbliżają się do siebie zarówno znaczeniowo, jak i formalnie.

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**Słowa kluczowe:** czasowniki kauzatywne, czasowniki antykauzatywne, kategoria strony, morfologia oparta na rdzeniu, języki słowińskie.