ALTERNATING UNACCUSATIVE VERBS IN SLOVENE

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Abstract
According to the Unaccusative Hypothesis (Perlmutter 1978) not all intransitive verbs share the same syntactic and argument structure, and can therefore be divided into two classes, unergative verbs and unaccusative verbs. This paper shows that in Slovene, like in many other languages, there exists a special class of unaccusatives which can participate in the causative alternation under certain conditions (when an externally caused event can come about spontaneously). These verbs always come in two variants, transitive (*Peter odpre okno* 'Peter opens the window') and intransitive (*Okno se odpre* 'The window opens'). The comparison with other languages reveals that Slovene alternating causative verbs exhibit all the crucial properties of this class of verbs. In Slovene the detransitivisation of causative verbs can be indicated by the cliticisation of the morpheme *se* (*odpreti – odpreti se* 'open'), by the change of the vowel -*i*- into -*e*- in the infinitive stem (*počrniti – počrneti* 'blacken') or by the use of identical form of the verb (*zmrzniti – zmrzniti* 'freeze'). The data, however, provide evidence that only reflexivisation is still productive in modern Slovene, while the other two processes are no longer employed to form new intransitive verbs from transitive causative verbs.

1. Introduction: Unaccusativity

The relationship between semantics and syntax has been an important issue in syntactic theory ever since the Unaccusative Hypothesis was first formulated by Perlmutter (1978) within Relational Grammar, and later adapted by Burzio (1986) into Government and Binding Theory. This syntactic hypothesis proposes that intransitive verbs can be divided into two classes, unergatives and unaccusatives, each having different underlying syntactic and argument structure. Unergatives subcategorise for one external argument and no internal argument, therefore they have a D-structure subject and no object, as illustrated in (1):

(1)   SING <u>1</u>>
        Peter sings. (D-structure and S-structure)

Unaccusatives, on the other hand, only subcategorise for one internal argument, to which they cannot assign either the external θ-role or accusative case. Therefore, their D-structure object undergoes NP movement to the subject position at S-structure, where it receives case. As is also shown in (2a), the moved NP leaves a trace in the object position, coindexed with the surface subject:

(2)   VANISH <1>
        a. e vanished [the thief]. (D-structure)
        b. [The thief$_i$] vanished t$_i$. (S-structure)

However, even the class of the unaccusatives can be further divided into several classes of verbs. According to the above definition of unaccusativity all of the following verbs can be said to have unaccusative status because they lack external arguments (Grimshaw 1990:29, 136, 152, 156, 160):

- unaccusatives: *ache, arrive, come, explode, fall, stop, vanish…*
- passives, as in *Peter was killed/murdered/robbed…*
- raising verbs: *appear, seem…*
- psychological (causative) verbs: *annoy, appal, bother, concern, disturb, enrage, frighten, irritate, please…*
- middles: *read, sell*, as in *This book sells well*
- intransitive variants of causative pairs (also called ergatives, inchoatives, anticausatives or decausatives): *break, open, sink,* as in *The door opened*
- reflexivised verbs: *se tuer* (French) 'kill oneself', *utopiti se* (Slovene) 'drown'…

What is immediately clear is that verbs with no external argument constitute a highly varied group of verbs. It is no wonder that despite several attempts to define which of these verbs can be considered 'pure' unaccusatives there is still no clear definition. Grimshaw (1990:30), for instance, distinguishes between true unaccusatives and non-agentive psychological verbs of the *frighten* class, arguing that only unaccusative verbs involve NP movement as shown in (2), while psychological verbs do not. Keyser & Roeper (1984:382-3), on the other hand, make a distinction between middles which, in their opinion, are transitive in the lexicon and only become intransitive in the syntax (e.g. *The book translates easily*), and ergatives (their term for intransitive variants of causative verbs), which have both transitive and intransitive forms in the lexicon, generated by lexical rules. Keyser & Roeper therefore divide intransitive verbs into two classes: pure intransitives (*sleep*) and ergatives (*melt*). Haegeman (1994:323, 330, 333) also acknowledges that the class of unaccusative verbs is not easily defined. In her view, it consists primarily of verbs of movement and verbs of (change of) state (*arrive, begin, come, die, emerge, enter, exist, follow, leave, occur*) as well as passives and raising verbs. However, she excludes verbs that participate in the causative alternation (*break, dry, open*) from the class of unaccusatives and refers to intransitive variants of alternation verbs as ergatives (Haegeman 1994:337).

In contrast, Levin & Rappaport Hovav (1995:80, 81) propose that verbs participating in the causative alternation are prototypical unaccusatives. Nevertheless, they are aware that the class of unaccusative verbs is not homogeneous and that causative analysis cannot be employed as a diagnostic for all unaccusative verbs. Consequently, Levin & Rappaport Hovav (1995:82, 133) divide intransitive verbs into three broad classes on the basis of their lexical semantic representation and their argument structure. The first class is that of alternating (dyadic) unaccusative verbs with a single direct internal argument. This class includes externally caused alternating verbs, such as *break, open* and *sink*. The second class of intransitive verbs are unaccusative verbs which are not related to causatives, such as verbs of disappearance (*die, disappear, vanish*) or (dyadic) verbs of existence and appearance with two internal arguments[1] (*appear, emerge, exist*). The third class is a class of (monadic) unergative verbs with a single external argument. They express internally caused eventualities (*bloom, blush, deteriorate*) and are very often agentive (*sing, smile, travel*).

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[1] As pointed out by Levin & Rappaport Hovav (1995:121), one of the internal arguments required by this class of unaccusatives must be a location argument, either overt or understood.

For the purpose of this study, I will consider all of the above mentioned classes of verbs lacking external arguments as unaccusatives, including verbs that can participate in the causative alternation. These causative alternation verbs always come in two variants, one transitive and the other intransitive, as illustrated below where transitive *break* in (3) means »cause to become broken«, whereas intransitive *break* in (4) means »become broken«:

(3)   Peter broke the window.
(4)   The window broke.

I would like to demonstrate that in Slovene there exists a distinct class of unaccusative verbs which participate in the causative alternation. I will compare their semantic and syntactic properties to those of causative alternating verbs in other languages, particularly English. I will examine the morphological and argument structures of transitive and intransitive variants and try to establish the semantic relationship between them. I will also look at the object of the transitive variant and the subject of the intransitive variant, describe their semantic relation to the verb and try to identify any selectional restrictions on their distribution. I would like to prove that alternating unaccusative verbs in Slovene exhibit the crucial properties of this class of verbs and support the hypotheses developed by Levin & Rappaport Hovav (1995) regarding alternating causative verbs. Finally, I will attempt to determine whether it is possible to predict which verbs can alternate and when. I will explore all the possible ways in which Slovene causative verbs can detransitivise, and propose that only one of the processes, detransitivisation with reflexivisation, is still productive in modern Slovene.

2. Alternating unaccusative verbs and the causative alternation

As pointed out above, the class of verbs which are considered prototypical unaccusatives by Levin & Rappaport Hovav (1995:80), particularly verbs of change of state, such as *break*, *dry* and *open,* can participate in the causative alternation. The situation in Slovene is the same, as shown in the following examples:

(5)   Peter je razbil kozarec. (Slovene)
        Peter AUX break:PCP glass
        'Peter broke the glass.'

(6)   Kozarec se je razbil. (Slovene)
        glass:SG:MASC:NOM SE AUX break:PCP:SG:MASC
        'The glass broke.'

(7)   Peter je odprl okno. (Slovene)
        Peter AUX open:PCP window
        'Peter opened the window.'

(8)   Okno se je odprlo. (Slovene)
        window:SG:NEUTER:NOM SE AUX open:PCP:SG:NEUTER
        'The window opened.'

In contrast, prototypical unergatives, such as *peti* 'sing', *smejati se* 'laugh' and *jokati (se)* 'cry' do not participate in the alternation (Levin & Rappaport Hovav

1995:81). In the case of the inherent reflexive or reciprocal verb *smejati se* 'laugh', *se* is the obligatory part of the verb's lexical entry, which does not add anything to the meaning of the verb, as in (9). *Jokati (se)*, moreover, has an optional *se*, which means that both variants, with and without *se*, represent the same unergative verb, as in (10):

(9)   a. Ana se smeje. (Slovene)
          Ana SE laughs
          'Ana laughs.'

        b. *Ana smeje. (Slovene)
          Ana laughs
          'Ana laughs.'

(10)   a. Ana se joka. (Slovene)
          Ana SE cries
          'Ana cries.'

        b. Ana joka. (Slovene)
          Ana cries
          'Ana cries.'

    Unlike the analyses in some earlier studies which assume that the intransitive variant of a causative alternation verb is basic and the transitive variant derived, Levin & Rappaport Hovav (1995:83) argue that it is the other way round. They claim that causative verbs do not result from a process of causativisation because they are inherently causative. Instead they undergo a process of detransitivisation under certain circumstances that allow the nonexpression of the cause. Let us consider some of the evidence they provide in support of this hypothesis.

    First, Levin & Rappaport Hovav (1995:79, 88) argue that in those languages where the alternation is characterised by morphologically related rather than identical forms of the verb in the two variants, the transitive causative form of the verb is morphologically unmarked, while the intransitive form is either identical to or derived from this form. Slovene is one of the languages where the two variants are usually not identical but morphologically related. In line with Levin & Rappaport Hovav's argument the transitive form of an alternating verb is always unmarked (*razbiti* 'break', *odpreti* 'open'), while the intransitive form can be derived by adding the morpheme *se* (*razbiti se* 'break by itself', *odpreti se* 'open by itself'), as shown in examples (5-8).

    Additionally, Levin & Rappaport Hovav (1995:82-84) suggest that alternating unaccusative verbs have a single lexical semantic representation associated with both their unaccusative and transitive forms, which is a causative lexical semantic representation. Thus verbs in (5) and (6) represent the same dyadic causative verb. This semantic relationship between the two variants is reflected in the fact that the subject of the intransitive use of the verb bears the same semantic relation to the verb as the object of the transitive use (Levin & Rappaport Hovav 1995:79, 84, 85). This suggests that they also have common selectional restrictions – that objects of transitive *razbiti* 'break' and subjects of intransitive *razbiti* 'break' coincide:

(11)   a. Peter razbije okno/skledo/čoln/zrcalo/jajce. (Slovene)
          Peter breaks window/bowl/boat/mirror/egg

'Peter breaks the window/the bowl/the boat/the mirror/the egg.'

    b. Okno/Skleda/Čoln/Zrcalo/Jajce se razbije. (Slovene)
       window/bowl/boat/mirror/egg SE breaks
       'The window/The bowl/The boat/The mirror/The egg breaks.'

(adapted from Bajec et al. 1997)

However, the selectional restrictions on the subject of the intransitive variant and the object of the transitive variant are not identical for any verb. As shown below, there are senses of the verb *razbiti* 'break' where the overlap in selectional restrictions is not complete.

(12)   a. Nasprotna skupina je razbila sestanek/demonstracijo/teorijo. (Slovene)
         opposing group AUX break:PCP meeting/demonstration/theory

    b. *Sestanek/Demonstracija/Teorija se je razbil/a. (Slovene)
       meeting/demonstration/theory SE AUX break:PCP

(adapted from Bajec et al. 1997)

The above examples illustrate that the set of the possible subjects for the intransitive use of a verb is a subset of the possible objects for the transitive use of the same verb. Levin & Rappaport Hovav (1995:86) consider this asymmetry to be another piece of evidence that the transitive form is basic since it imposes less restrictions on its arguments. Note, however, that the examples in (12b) are only ungrammatical because of the nature of the noun in the subject position. Our knowledge of the world tells us that the events described cannot happen spontaneously, therefore they cannot be described in sentences without an animate intentional and volitional agent (Rappaport & Hovav 1995:93-94).

In addition, Keyser & Roeper (1984:389, 395-396) provide some morphological data in support of the view that the transitive variant is the basic member of a causative pair. First, they examine the suffix *-er*, which refers to subjects, but not to subjects of derived verbs. If the transitive form of an alternating verb is basic we can predict that a noun with the suffix *-er* (or its Slovene equivalent) could refer to the subject of the transitive variant, as shown in the example below where *pek-ø* 'bak-er' can refer to *moški* 'the man', which is the subject of the transitive *peči* 'bake'.

(13)   a. Moški je pekel kruh. (Slovene)
         man AUX bake:PCP bread
         'The man baked the bread.'

    b. Pek je pekel kruh. (Slovene)
       baker AUX bake:PCP bread
       'The baker baked the bread.'

However, if the intransitive variant is derived, we can predict that a noun with the suffix *-er* could not refer to the derived subject *kruh* 'the bread' of the intransitive *peči* 'bake'. Example (14), which does not have agentive reading, shows that this is indeed the case in both English and Slovene:

(14)   a. Kruh se je pekel. (Slovene)
             bread SE AUX bake:PCP
             'The bread baked.'

         b. *Pek se je pekel. (Slovene)
             baker SE AUX bake:PCP
             '*The baker baked.'

Second, Keyser & Roeper (1984:389, 403-404) introduce a notion of a lexical trace, arguing that if the intransitive variant of a causative pair is a result of a transformation, then there must be a coindexed trace left in the object position, which blocks lexical insertion. Therefore, unergative intransitive verbs, which are underived, should allow the object position to be occupied by a cognate object, whereas unaccusative alternating verbs should not. This is illustrated in (15) and (16):

(15)   Peter je pel čudno pesem. (unergative verb) (Slovene)
         Peter AUX sing:PCP strange song
         'Peter sang a strange song.'

(16)   *Ladja se je potopila čudno potopitev. (unaccusative verb) (Slovene)
         ship SE AUX sink:PCP strange sinking
         '*The ship sank a strange sinking.'

Finally, we should also consider how Slovene causative alternation verbs are perceived by the speakers, as reflected in Slovene dictionaries. The transitive form of an alternating verb is always the main entry in Slovene dictionaries, while the detransitivised form is usually a sub-entry (Bajec et al. 1997). Such is for instance the verb *potopiti* 'sink', whose transitive form is the main entry with the basic meaning »cause to go under water«, as in *potopiti ladjo* 'sink a ship'. Its intransitive form is a sub-entry with the meaning »go under water«, as in *Ladja se je potopila* 'The ship sank'. Despite the fact that the examples illustrating the two uses of Slovene alternating verbs are not always consistent,[2] it is evident that the transitive variant is considered basic and the intransitive variant derived.

In sum, Slovene unaccusative verbs which participate in the causative alternation provide substantial evidence in support of the argument that the transitive variant of a causative alternating verb is basic and the intransitive derived. It has been shown that in Slovene the intransitive form of a causative verb is normally morphologically marked and imposes more stringent selectional restrictions on its arguments. Furthermore, the subject of the intransitive form exhibits typical characteristics of a derived subject. Let us now turn to consider some more characteristics of this class of verbs.

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[2] The verb *odpreti* 'open', for instance, has a sub-entry *odpreti se* 'open by itself' (Bajec et al. 1997), but the example *Vrata so se sama odprla* 'The door opened by itself' is listed under the transitive form of the verb. In some cases the intransitive form of an alternating verb is not included in a dictionary as a separate entry at all. For instance, the verb *razbiti* 'break' has the intransitive examples, such as *Ogledalo se je razbilo* 'The mirror broke' listed together with the transitive ones, such as *Razbila je vse kozarce* 'She broke all the glasses', without making any distinction between the two uses. These examples indicate that traditional Slovene linguists may not be aware that verbs like *potopiti* 'sink', *odpreti* 'open' and *razbiti* 'break' constitute a distinct class of alternating verbs which share common semantic and syntactic properties.

3. The morpheme *se* in Slovene

We have seen that in the above examples, Slovene intransitive forms of alternating verbs are derived by adding the morpheme *se*. Levin & Rappaport Hovav (1995:84, 88) propose that the intransitive form must arise from an operation that prevents the causer argument from being projected to the lexical syntactic representation. Therefore, the morphological marking of intransitive variants in Slovene has a function: it is needed to indicate the nonexpression of the external cause of the event. Incidentally, there are several types of related constructions with the morpheme *se* in Slovene which have nearly identical surface appearance but exhibit different underlying structures. In order to understand fully the role of *se* in the causative alternation, we must first consider all the possible types of Slovene constructions with the morpheme *se*:

(17) a. Ana se umiva. (Slovene)
Ana SE washes
'Ana washes herself.'

b. Peter in Ana se gledata. (Slovene)
Peter and Ana SE watch
'Peter and Ana watch each other.'

(18) a. Peter se smeje. (Slovene)
Peter SE laughs
'Peter laughs.'

b. Peter (se) joka. (Slovene)
Peter (SE) cries
'Peter cries.'

(19) a. Ladja se naklada. (Slovene)
ship SE loads
'The ship is being loaded.'

b. Samo enkrat se živi. (Slovene)
only once SE lives
'You only live once.'

(20) Okno se odpre. (Slovene)
window SE opens
'The window opens.'

A closer look at the above sentences reveals that despite similarities in surface structure, there are several different uses of the morpheme *se*. In (17) *se* is the clitic of a reflexive or reciprocal pronoun coindexed with the subject and functioning as the direct object of a transitive verb. There is plenty of evidence that *se* in these two sentences is a clitic pronoun in objective case. First, in (17a) *se* can be replaced by the full reflexive pronoun *sebe* 'herself', as shown in (21). In (17b), *se* can be replaced by the full reciprocal pronoun *eden drugega* 'each other, one another', as shown in (22).

(21)   Ana umiva *sebe*. (Slovene)
        Ana washes herself
        'Ana washes herself.'

(22)   Peter in Ana gledata *eden drugega*. (Slovene)
        Peter and Ana watch each other
        'Peter and Ana watch each other.'

Second, *se* in (17) can be replaced by a direct object NP, yielding a nonreflexive reading:

(23)   Ana umiva *otroka*. (Slovene)
        Ana washes child:ACC
        'Ana washes a child.'

(24)   Peter in Ana gledata *film*. (Slovene)
        Peter and Ana watch film:ACC
        'Peter and Ana watch a film.'

Consequently, *umiti se* and *gledati se* do not form lexical units stored in the lexicon because the co-existence of the verb and the morpheme *se* is a result of syntactic rather than lexical processes.

In (18), on the other hand, *se* is an inherent part of an unergative reflexive or reciprocal verb with no meaning of its own. In (18a) *se* is an obligatory part of the verb's lexical entry. It cannot be omitted because the form of the verb without *se* does not exist in Slovene, as was already shown in (9). Conversely, *se* in (18b) is optional and can freely be omitted without any effect on the semantic properties of the verb, as shown in (10). The morpheme *se* in inherent reflexive or reciprocal verbs such as in (18) is therefore a nonreferential morpheme rather than the clitic of a reflexive pronoun. This is particularly evident in those inherent reflexive or reciprocal verbs that can take either *se* (which is accusative in form) or *si* (which is dative in form) without changing the verb's lexical meaning (for instance *drzniti se/drzniti si* 'dare', *izmišljati se/izmišljati si* 'invent', *oddahniti se/oddahniti si* 'pause', *odpočiti se/odpočiti si* 'rest', *opomoči se/opomoči si* 'recover', *premisliti se/premisliti si* 'change one's mind', *upati se/upati si* 'dare'):

(25)   a. Peter se opomore. (Slovene)
           Peter SE recovers
           'Peter recovers.'

        b. Peter si opomore. (Slovene)
           Peter SI recovers
           'Peter recovers.'

Sentences in (19), however, represent middle constructions, derived by the syntactic process which demotes the external argument, interpreted as human, either generic or indefinite. In Slovene traditional grammars (Toporišič 2000:357), sentences (19a) and (19b) are referred to as passive and active impersonal constructions, respectively. Some generative analyses (Rivero & Milojević Sheppard 2003) also follow this distinction, analysing *se* in (19b), that is a sentence with an intransitive

verb, as a subject indefinite pronoun. I will adopt a unified approach to all sentences with a demoted external argument and human interpretation, whether derived from transitive or intransitive verbs, and refer to them as middles, since they share identical syntactic and semantic structure with middle constructions in several other languages, as shown below.

(26)   Ce livre se lit facilement. (French)
       this book SE reads easily
       'This book reads easily.'

<div align="right">(adapted from Fagan 1992:9)</div>

(27)   Es arbeitet sich gut mit diesem Apparat. (German)
       it works SICH well with this device
       'One can work well with this device.'

<div align="right">(adapted from Fagan 1992:190)</div>

I argue that *se* in middles from both transitive and intransitive verbs is not an argument, but rather is a nonreferential and nonthematic morpheme whose function is to indicate the demotion of the external argument.

In most languages the external argument cannot be overtly expressed in middles. However, this property varies cross-linguistically since in some languages middles can co-occur with an agent. In Russian middles, for instance, an agent is regularly permitted, as shown in the example below where the agent is expressed by an NP in instrumental case:

(28)   Pol mylsja devockoj. (Russian)
       floor wash:IMPERF:SJA girl:INST
       'The floor was being washed by the girl.'

<div align="right">(Siewierska 1984:162)</div>

Middle formation is a very productive syntactic process in Slovene. In order to express nonagentive meaning, middles can be formed from most types of verbs, transitive and intransitive (as shown in (19b)), as long as their understood subject can be interpreted as *ljudje na splošno* 'people in general', *nekateri* 'some people' or *nekdo* 'someone'.

Finally, in (20), a transitive causative verb *odpreti* 'open' is made intransitive by combining with the morpheme *se*. The object of the transitive variant of the verb (*okno* 'the window') is in the subject position, whereas the subject of the transitive variant, that is the causer of the event, is not expressed. The morpheme *se* in (20) is nonreferential, added to the verb during a lexical process which suppresses the external argument. Unlike in middles, the causer of the event expressed by the intransitive variant of a causative verb is always interpreted as an unspecified and nonidentified external cause and can never be explicit:

(29)   Okno se odpre (*od Petra). (Slovene)
       window SE opens (by Peter)
       'The window opens (*by Peter).'

We can conclude, then, that example (20), a sentence with an intransitive verb derived from a transitive causative verb by adding the morpheme *se*, differs from all

other constructions with *se* in Slovene.[3] This is also in accord with Slovene grammars, which normally distinguish this type of sentences from other constructions with *se* (Žagar 1986:285; Herrity 2000:156-157). However, no attempts have been made to provide an explanation of the special function of *se* in this type of sentences. The fact that *odpreti se* 'open by itself' forms a lexical unit found as a separate entry in dictionaries is also consistent with Keyser & Roeper's (1984:382) argument that ergatives (i.e. intransitive variants of causative verbs) are derived in the lexicon, rather than the syntax.

We can now consider Grimshaw's (1990:152-153) proposal that reflexive clitics in sentences like (20) are not arguments but rather are valency reducing morphemes added to verbs as by-products of a lexical binding process. She argues that during clitic reflexivisation one argument of a predicate is bound to another. Our Slovene examples bear out this suggestion – causative verbs which have undergone clitic reflexivisation behave as if they were intransitive. Consequently, if the intransitivity of these derived forms is a result of a process, the cause argument must still be contained at some level of representation and its presence could be reflected by an adverbial modifier, as argue Levin & Rappaport Hovav (1995:88). They give an example of an Italian phrase *da sè* meaning 'by itself' in the sense of 'without outside help', which can be used in sentences with intransitive forms of alternating verbs:

(30)   La porta si è aperta da sè. (Italian)
        the door opened by itself
        'The door opened by itself.'

Likewise, a Slovene phrase *sam od sebe*, meaning the same as its Italian counterpart, can refer to a nonexpressed or nonidentified cause argument in sentences with detransitivised causative verbs:

(31)   Vrata so se odprla sama od sebe. (Slovene)
        door AUX SE open:PCP by itself
        'The door opened by itself.'

It follows that the intransitive verbs which do not participate in causative alternation should not allow an adverbial meaning 'without outside help'. Thus the strangeness of the following example can be accounted for:

(32)   ??Ana poje sama od sebe. (Slovene)
        Ana sings by herself
        '??Ana sings by herself.'

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[3] At this point we should also consider intransitive verbs such as *imeti se* 'feel', which appear to be derived from transitive (non-causative) verbs. However, the detransitivisation of *imeti* 'have' brings about the change of lexical meaning, as shown below. This is evidence that *imeti se* 'feel' is not derived from the transitive form. Rather, it represents a distinct inherent reflexive verb.

(i)   Peter ima psa. (transitive verb) (Slovene)
        Peter has dog
        'Peter has a dog.'

(ii)   Peter se ima lepo. (intransitive verb) (Slovene)
        Peter SE has fine
        'Peter feels fine.'

As the final evidence that causative alternating verbs in Slovene constitute a special class of verbs we can consider the variable verb *potopiti se* 'dive, sink' in the following examples:

(33)   ??Peter se je potopil sam od sebe. (Slovene)
         Peter SE AUX dive:PCP by himself
         '??Peter dived by himself.'

(34)   Ladja se je potopila sama od sebe. (Slovene)
         ship SE AUX sink:PCP by itself
         'The ship sank by itself.'

In (33) where the verb *potopiti se* denotes an unergative reflexive intransitive verb meaning 'dive', the phrase *sam od sebe* 'by himself' is unacceptable, because the causer of the event (the volitional external argument) is already expressed by the subject. By contrast, in (34) where the verb is an intransitive variant of a causative verb meaning 'sink', the phrase *sam od sebe* 'by itself' can refer to the suppressed causer.

So far I have managed to provide several arguments in support of the proposition that in Slovene there is a special class of alternating causative verbs which exhibit exactly the same characteristics as their counterparts in English and some other languages. My next step is to focus on the question whether it is possible to predict which of the Slovene verbs can participate in the causative alternation and when.

4. Detransitivising processes in Slovene

When trying to provide a more precise semantic characterisation of the class of alternating verbs, Levin & Rappaport Hovav (1995:89, 91-94) introduce a distinction between »internal« and »external« causation, which can help us predict more accurately which causative verbs do and do not alternate. According to their definition, verbs that express internally caused eventualities, which can come about spontaneously (*blush, glitter, shine, smell, tremble)*, do not participate in the causative alternation. Conversely, externally caused verbs, which imply an external cause that brings about the eventuality (*break, open, sink*), do alternate. For these verbs the causer does not need to be explicitly expressed because our knowledge of the world tells us that the eventuality could not happen without an external cause even when the cause is not specified.

Let us now examine the evidence from Slovene. As expected, internally caused verbs, such as *bleščati (se)* 'shine', *smrdeti* 'smell', *svetiti se* 'glitter', *trepetati* 'tremble', *zardeti* 'blush', do not alternate. They have no transitive variant, which means that they can never be followed by a direct object, as seen in the following ungrammatical example:

(35)   *Ana je zardela Petra. (Slovene)
         Ana AUX blush:PCP Peter
         '*Ana blushed Peter.'

Note that since internally caused verbs are inherently intransitive the morpheme *se* (when present) is not a detransitiviser, but obligatory or optional part of the verb with which it forms a lexicalised unit:

(36)   Sonce (se) blešči. (Slovene)
        sun (SE) shines
        'The sun shines.'

On the other hand, all the verbs that can participate in the causative alternation denote externally caused eventualities (*odpreti* 'open', *razbiti* 'break', *skrčiti* 'shrink', *zapreti* 'close'). This suggests that in Slovene, like in English, transitive causative verbs can only detransitivise when an externally caused eventuality can come about spontaneously without the intentional and volitional intervention of an agent. Levin & Rappaport Hovav (1995:93-98, 102, 105, 106) make a list of the following main classes of causative alternation verbs in English:

- verbs of change of state (physical shape or appearance): *bake, blacken, break, close, cool, dry, freeze, melt, open, shatter, thaw, thicken, whiten…*
- verbs of motion that are not necessarily agentive: *bounce, move, roll, spin…*
- deadjectival verbs describing physical characteristics, colour and temperature as transitory activities: *awaken, blacken, broaden, brown, cheapen, clean, clear, cool, dirty, empty, quiet, slow, sober, sour, tame, tan, thin, widen…*
- verbs of spatial configuration which denote postures that can be brought about by an external cause: *hang, lean, lie, sit, stand…*

However, some of the verbs that can participate in the causative alternation in English, do not have the usual transitive-reflexivised pairs in Slovene. Like in English, some verbs can have identical transitive and intransitive variants, such as *zmrzniti* 'freeze':

(37)   Peter je zmrznil meso. (Slovene)
        Peter AUX freeze:PCP meat
        'Peter froze the meat.'

(38)   Meso je zmrznilo. (Slovene)
        meat AUX freeze:PCP
        'The meat froze.'

It seems that there is only a small closed class of verbs with identical forms in the two variants. Other examples for instance include: *detonirati* (vt, vi) 'detonate'; *odmrzniti* (vt, vi) 'thaw'; *počiti* (vt, vi) 'burst'; *zamrzniti* (vt, vi) 'freeze'. Moreover, this class of verbs does not seem to be very stable, since some of the verbs with identical forms, like *iztiriti* 'derail' and *zakrkniti* 'harden', can also have the intransitive variant with the morpheme *se* (*iztiriti/iztiriti se* 'derail'; *zakrkniti/zakrkniti se* 'harden'):

(39)   Peter je zakrknil srce. (Slovene)
        Peter AUX harden:PCP heart
        'Peter hardened his heart.'

(40)   Srce (se) mu je zakrknilo. (Slovene)
        heart (SE) he:DAT AUX harden:PCP
        'His heart hardened.' (literally: 'The heart hardened to him.')

Alternatively, the intransitive variants of causative verbs in Slovene can be derived from the transitive ones by the change of the vowel *-i-* into *-e-* in the infinitive stem (e.g. *počrniti* (vt) – *počrneti* (vi) 'blacken'):

(41)   Dim je počrnil kuhinjo. (Slovene)
        smoke AUX blacken:PCP kitchen
        'The smoke blackened the kitchen.'

(42)   Kuhinja je počrnela. (Slovene)
        kitchen AUX blacken:PCP
        'The kitchen blackened.'

Some other causative verbs that undergo the same process are: *blediti* (vt) – *bledeti* (vi) 'pale, fade'; *dozoriti* (vt) – *dozoreti* (vi) 'ripen'; *dreveniti* (vt) – *dreveneti* (vi) 'stiffen'; *ošibiti* (vt) – *ošibeti* (vi) 'weaken'; *otrditi* (vt) – *otrdeti* (vi) 'stiffen'; *oživiti* (vt) – *oživeti* (vi) 'revive'; *pordečiti* (vt) – *pordečeti* (vt) 'redden'; *porjaviti* (vt) – *porjaveti* (vi) 'brown, tan'; *porumeniti* (vt) – *porumeneti* (vi) 'yellow'; *posuroviti* (vt) – *posuroveti* (vi) 'coarsen'; *potemniti* (vt) – *potemneti* (vi) 'darken'; *zoriti* (vt) – *zoreti* (vi) 'ripen'. Interestingly, they are all verbs denoting a change of physical state or colour.

At first sight, vowel change seems to be an alternative to reflexivisation. However, it should be noted that like verbs with identical forms, verbs which detransitivise by changing *-i-* into *-e-* seem to form a closed class to which new members are no longer added.[4] Furthermore, like verbs with identical transitive and intransitive forms, this class of verbs does not seem to be stable. Many verbs of change of state have two intransitive variants – one derived by vowel change and the other with the detransitivising *se* (*oslabiti* (vt) – *oslabeti/oslabiti se* (vi) 'weaken'). As shown below, transitive sentence (43) can have two intransitive variants with identical meaning:

(43)   Sovražnik je oslabil napad. (Slovene)
        enemy AUX weaken:PCP attack
        'The enemy weakened the attack.'

(44)   a. Napad je oslabel. (Slovene)
          attack AUX weaken:PCP
          'The attack weakened.'

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[4] Priestly (1999) presents an experiment measuring derivational productivity in Slovene, which shows that *-iti* is more productive than *-eti*. On the analysis proposed here, this result is predictable. The forms in *-eti* are by definition less productive and more constrained because they are derived and, moreover, because the change of the vowel represents only one of the three possible processes that derive intransitive causative verbs in Slovene. Thus Priestly's findings independently support the main hypotheses of this paper that transitive forms of causative verbs are basic and that the change of the vowel in the infinitive stem is not a productive process of deriving their intransitive variants.

b. Napad se je oslabil. (Slovene)
   attack SE AUX weaken:PCP
   'The attack weakened.'

Some other examples include: *beliti* (vt) – *beleti/beliti se* (vi) 'whiten'; *črniti* (vt) – *črneti/črniti se* (vi) 'blacken'; *debeliti* (vt) – *debeleti/debeliti se* (vi) 'fatten'; *rjaviti* (vt) – *rjaveti/rjaviti se* (vi) 'brown, tan'; *rumeniti* (vt) – *rumeneti/rumeniti se* (vi) 'yellow'; *šibiti* (vt) – *šibeti/šibiti se* (vi) 'weaken'; etc.

The apparent confusion between transitive and intransitive forms of causative verbs can partly be accounted for by the fact that in the present tense both transitive verbs ending in *-iti* and intransitive verbs ending in *-eti* have the same vowel *-i-* preceding the personal endings, so speakers no longer distinguish between the two:

(45)   ***črniti*** (vt)   ***črneti*** (vi) 'blacken' (Slovene)
   1SG   *črnim*   *črnim*
   2SG   *črniš*   *črniš*
   3SG   *črni*, etc.   *črni*, etc.

This is not the only instance of a distinction between two forms of a verb being lost in modern Slovene. The same has happened to some verbs of motion which can appear in determinate and indeterminate pairs (*jahati* 'ride a horse (once or in one direction)', *jezditi* 'ride a horse (frequently or in more than one direction)'). In modern Slovene the distinction between the two forms has been lost (Herrity 2000:226-227):

(46)   Peter jaha/jezdi brez sedla. (Slovene)
        Peter rides/rides without saddle
        'Peter rides without a saddle.'

Consequently, when the intransitive verbs in *-eti* can be reanalysed as their transitive causative variants, speakers use reflexivisation in order to mark the change of the verb's valency.

Judging by the examples discussed above, we can argue that in Slovene there is a tendency to mark morphologically the detransitivisation of causative verbs. The only productive process of the detransitivisation of causative verbs in modern Slovene seems to be the cliticisation of the morpheme *se*. This idea is supported by the fact that new members are no longer added either to the class of verbs which have identical transitive and intransitive variants, or to the class of intransitive verbs derived by the change of the vowel *-i-* into *-e-*. Clitic reflexivisation in modern Slovene is applied not only to the majority of causative verbs but also to all new causative verbs, normally derived from loan words (*poamerikaniti* (vt) – *poamerikaniti se* (vi) 'Americanise'; *podemokratiti* (vt) – *podemokratiti se* (vi) 'democratise'; *poevropiti* (vt) – *poevropiti se* (vi) 'Europeanise'). Detransitivisation by the change of the vowel and the use of an identical causative verb might have been productive in the past, but in modern Slovene these two processes are no longer used to derive new intransitive variants of causative verbs, as shown in (48b-c):

(47)   Poskušajo poevropiti prebivalce. (Slovene)
        try:PRES:3PL Europeanise:INFIN citizens
        'They try to Europeanise the citizens.'

(48) a. Moramo se poevropiti. (Slovene)
      must:PRES:1PL SE Europeanise:INFIN
      'We have to become Europeanised.'

     b. *Moramo poevropiti. (Slovene)
      must:PRES:1PL Europeanise:INFIN
      'We have to become Europeanised.'

     c. *Moramo poevropeti. (Slovene)
      must:PRES:1PL Europeanise:INFIN
      'We have to become Europeanised.'

Lastly, we should consider yet another type of causative pairs in Slovene. The causative verb *potopiti* 'sink', which is normally detransitivised by reflexivisation, also has the intransitive variant *potoniti* 'sink by itself', which is a different verb, not derived from the transitive form. However, the causative pair *potopiti* (vt) – *potoniti* (vi) 'sink' and their derivational forms seem to be the only example of the use of such substitution in the causative alternation in Slovene.

5. Conclusion

The paper has shown that alternating unaccusative verbs in Slovene form a separate class of verbs with distinct semantic and syntactic properties with regard to their basic meaning, syntactic and argument structure as well as restrictions they impose on their derived subjects. In Slovene, the causative alternation is usually characterised by morphologically related forms. In most cases intransitive variants are derived by reflexivisation of a transitive causative verb. The morpheme *se*, which is added to the transitive variant during the process of reflexivisation, has a special function: it indicates the suppression and nonexpression of the external cause of the event, when this event can occur spontaneously. In that it differs from all other uses of *se* in Slovene, where *se* can also function as the clitic of a reflexive or reciprocal pronoun, represent an obligatory or optional part of an inherent reflexive or reciprocal verb, or indicate the demotion of a generic or indefinite human external argument in middles. However, reflexivisation is not the only process of detransitivisation of causative verbs in Slovene, since it does not appear to be possible wherever the two conditions (external causation and spontaneous occurrence) are met. In Slovene the intransitive variants of causative alternation verbs can be formed in three different ways:

- the intransitive variant can be derived by reflexivisation (*odpreti* (vt) – *odpreti se* (vi) 'open')
- the intransitive variant can be derived by the change of the vowel in the infinitive stem (*počrniti* (vt) – *počrneti* (vi) 'blacken')
- the transitive and intransitive variants can have identical forms (*zmrzniti* (vt) – *zmrzniti* (vi) 'freeze')

Of all the above possibilities, detransitivisation by reflexivisation appears to be the only productive process in modern Slovene. It is applied to most of the causative verbs, including new causative verbs. Other processes do not seem to be productive any more. Moreover, both intransitive variants derived by the change of the vowel in the infinitive stem as well as those with identical verb form can often be replaced by

reflexivised forms. This suggests that there is a tendency among Slovene speakers to mark causative alternation by the use of the morpheme *se*. One of the reasons for this tendency in the language might be that speakers no longer perceive the distinction between the original transitive and intransitive forms, and use reflexivisation as a default process of detransitivisation.

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