

6. A diachronic change of the *reflexiva tantum* psychological verbs in Croatian

LIDIJA MILKOVIĆ

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In this paper, the changes in the valency of the *reflexiva tantum* psychological verbs in Croatian are analysed within the framework of the Slavic languages' history. Mainly, lexicographic sources were used to study the diachronic change of verb valency. The valency change was observed through five parameters. These parameters form a hierarchy of diachronic stability, starting from the least stable: the morphosyntactic properties of arguments > reflexive marking > transitivity > causativity > semantic class. In general, according to the results shown in this paper, most *reflexiva tantum* psychological verbs in the history of the Croatian language have a relatively recent origin. According to the typological parameter of the basic valency orientation, Croatian was, to a lesser degree, a detransitivizing language in the earlier periods of its history.

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1. Introduction

Psychological verbs are a group of verbs with a stable syntactic and semantic structure which is visible in their potential for regular diathesis alternations and in their semantic role composition (Brač & Bošnjak Botica 2015; Padučeva 2004: 287; Van Gelderen 2019; Levin & Rappaport Hovav 2005). The *reflexiva tantum* verbs differ from the majority of verbs by appearing exclusively with a morphological reflexive marking (Oraić Rabušić 2018: 76; Belaj 2001: 4, *this volume*, section 2.1.1). A greater or smaller presence of the *reflexiva tantum* verbs in various periods within a language history can point to a diachronic change of the typological parameter of the basic valency orientation (Nichols, Peterson & Barnes 2004). The change of the possibility of entering reflexive pairs affects the other syntactic and semantic characteristics of verbs. Along with

the possibility of verbs taking a reflexive and a non-reflexive form, four additional parameters will be studied in this work: a) the change of the arguments, b) transitivity, c) causativity, and d) the verb meaning change. Based on the stated parameters, verbs will be classified in groups according to the changes which have modified the verb through time. Taking into consideration that for Croatian there are currently no dictionaries or corpora available online specialized in the earlier periods of the language and that the sources from one Slavic language do not make it possible to establish the diachronic primary state of the (non) reflexive form, the data on the stated parameters will be excerpted from the earlier periods of other Slavic languages (Old East Slavic dictionaries, Old Czech Dictionary (henceforth OCZ) and Old Polish Dictionary (henceforth SS)).⁹⁰ The comparison of the Slavic languages from the earlier periods with the contemporary Croatian language makes it possible to answer the question about the diachronic primary status of the *reflexiva tantum* psychological verbs and about the special characteristics of the change of the studied parameters in the history of Croatian.

2. *Reflexiva tantum* psychological verbs

The term *Reflexiva tantum* denotes a group of reflexive verbs which occur in language exclusively with a reflexive marker, i.e. which do not have a transitive verb pair (Oraić Rabušić 2018: 76; Belaj 2001: 4). The verbs within this morphologically defined category can be subjected to various classification principles. For the *reflexiva tantum* verbs, Belaj (2001: 4), also uses the Croatian term *primarnopovratni* (primary reflexive verbs) and separates these verbs into two categories based on the criterion of the relationship of the actants involved in an action. Verbs marked by an action that includes one or more individual subjects belong to the first group and verbs with reciprocal-reflexive meaning belong to the second

⁹⁰ There are open-access transliterations of the Beram breviaries available on the website of the *Old Church Slavonic Institute*. The Beram breviaries are written in Croatian Church Slavonic, which differs from Old Croatian. In addition, there is also the *Regensburg Croatian diachronic corpus*, consisting of texts written between the 16th and 19th century (Hansack *et al.* 2016: 6). Unfortunately, the corpus is not currently available online, so it is not included in this research.

group. Oraić Rabušić (2018: 77-79) divides the group of the *reflexiva tantum* verbs to subcategories according to the following criteria: 1) whether the participants of an action marked by the verb are animate or inanimate and 2) the semantic roles of the predicates in the position of the main parts of the sentence. The semantic and syntactic principles of classification are intertwined in the mentioned categorization. Verbs researched in this work have been selected based on the semantic verb classification criterion i.e. further classification of the *reflexiva tantum* verbs is based on the semantic class⁹¹ to which a psychological verb belongs. The psychological verbs selection criterion and the names for other semantic classes rely on the verb classification in the *Croatian Verb Valency database*. According to the classification in the *Croatian Verb Valency database* (Brač & Bošnjak Botica 2015), psychological verbs are the fifth most frequent semantic group of verbs with 34 groups in total. Along with the *Croatian Verb Valency database*, there is another comprehensive source of data on the verb valency, the *Croatian Valency Lexicon of Verbs* or *CROVALLEX* (Mikelić Preradović 2020). The verb classification in that lexicon is based on syntactic-semantic criteria and contains 180 semantic classes. Due to such a difference in the number of thematic classes, the same verb can sometimes belong to different thematic classes in the two classifications. The verbs that belong to the psychological verbs' class both in the *Croatian Verb Valency database* and the *CROVALLEX* are also found in other classes, such as the verb *zaljubiti se* 'to fall in love', which is classified as a *marriage verb* (Mikelić Preradović 2020: 59). The shared characteristic that makes psychological verbs a separate class is the description of the emotional state of a human being (Brač & Bošnjak Botica 2015). The psychological verbs' thematic class is specific in that it is mostly unique both by semantic and syntactic criteria i.e. most members of this class share the same thematic roles. All psychological verbs have one actant in common, which marks an entity, a human being, in the thematic role of an Experiencer, and another actant that marks the cause, which can belong to various categories from

⁹¹ Semantic classes are groups of words with a common semantic constituent, which has a central position in the semantic structure, described using dictionary entries (Padučeva 2004: 43). The classes are formed according to the principle of consolidation of the common semantic characteristics and not by finding differences to form separate classes.

the non-linguistic reality (events, sounds, natural forces).⁹² Psychological verbs are also often characterized by the thematic role of patient, which most usually describes the face to which the experiencer's feelings are transmitted (Padučeva 2004).

Psychological verbs can form regular polysemy relations⁹³ with other thematic classes of verbs. The verbs of perception are in regular polysemy relation with verbs of thinking, because, for example, the verbs *vidjeti* 'to see', *razmatrati* 'to consider', *sagledati* 'to perceive', can mark in different uses both the visual perception and the process of thinking about what has been perceived. The similarity between these meanings is established using a metaphor as a cognitive mechanism. According to Padučeva (2004), psychological verbs enter the regular polysemy relationships with 1) communication verbs and 2) mental-state verbs. Padučeva (2004: 537) holds the view that the mechanism of the regular polysemy works on both the synchronic and the diachronic level, i.e. that throughout the history of a language, the same changes of meaning which occur in the synchrony, have occurred on the diachronic level as well. This idea fits the perspective that synchrony and diachrony are not completely separate from each other, and that polysemic lexemes often determine the diachronic processes' intensity, as these processes can be more or less schematic (Raffaelli 2009: 141–143).

⁹² In different theoretical approaches the semantic role of psychological verbs is termed differently and attitudes on the equivalence of the semantic roles of psychological verbs with different valency patterns are not compliant. The hierarchical polystratal depictions of verb arguments, typical for generative grammar, are more prone to make use of a greater number of semantic roles, with the aim of preserving the position equivalence in the syntactic structure, and the assigning of the semantic roles (Grimshaw 1990; Pesetsky 1995; Van Gelderen 2019). In functional approaches, the tendency to consolidate semantic roles and/or accepting the possibility that one argument can have more than one semantic role is predominant (Van Valin & LaPolla 1997; Padučeva 2004; Levin & Rappaport Hovav 2005).

⁹³ Apresjan (1974: 16) defines the regular polysemy of words as the following: «Polysemy of the word A with the meanings a_i i a_j is called regular if, in a given language, there exists at least one other word B with the meaning b_i and b_j , which are semantically distinguished from each other in exactly the same way as a_i and a_j , and if a_i and b_i , a_j and b_j are non-synonymous.» According to Padučeva (2004), the regular polysemy is a semantic relationship which does not only relate to words, but also to semantic classes.

3. Verb valency of reflexive verbs

The change caused by adding a reflexive marking to a verb can be accompanied by the reorganization of verb actants, which can lead either to a minimum change of meaning or to a complete change of verb meaning. The formal change by which the verb is necessarily used with a reflexive marking can highlight, in diachronic perspective, how verb arguments have changed (increase or the decrease in their number, change of the case of the argument, replacement of the bare case argument with a prepositional argument) or it can depict the derivation of the actant. Actant derivation is a model which describes the minimal change of the number and the composition of semantic roles, caused by adding morphological marking to the verb base or the root (Plungân 2011). According to Plungân (2011), it is sometimes difficult to distinguish between actant derivation and verbal aspect, because the morphological indicators of these two grammatical phenomena are often homonymic. Nevertheless, the core difference lies in the fact that a change in verb aspect also changes the pragmatic interpretation of the situation, and actant derivation changes the number and/or the composition of semantic roles. There are three different types of derivation: 1) valency-increasing derivation; 2) valency-decreasing derivation; and 3) interpretive derivation (Plungân 2001). A morphologically-marked valency change in Slavic languages can include all three types of derivation. Verb valency increase is expressed by a causative which is considerably less frequent than the formal decausative in Slavic languages. The causative meaning of the verb is determined in contrast to the non-causative meaning, i.e. the causative form enters a minimal pair with the non-causative.

Z. Gołąb (1968) highlighted four types of causative pairs' formation in the history of Slavic languages. The opposition of two verbs differing from each other by their suffixes, or by the apophony of the root (e.g. **piti* 'to drink' ~ 'to water, i.e. to cause to drink' **poiti*, **sěděti*/**sěsti* 'to sit' ~ **saditi* 'to make sit', **rasti* 'to grow' ~ **rastiti* 'to raise') is characteristic of the first type. The second type includes denominal verbs, i.e. the verbs derived from nouns or adjectives. Verbs which enter minimal pairs differ by their suffixes. The suffix *-ě-* denotes an intransitive verb of state or of change of state, and the suffix *-i-*, a transitive verb which marks a conscious action performed on an object (Gołąb 1968), e.g. **němъ* 'mute' → **oněmiti* 'to silence': **oněměti* 'to lose the faculty of speech'; **zelenъ* 'green' → **zeleniti* 'to make green': **zeleněti* 'to become green'. The third type of the causative formation is the

dereflexivization of verbs with reflexive markings. Verbs having a reflexive marking have replaced the intransitive denominal verbs ending in *-ěti/-ějo*, with the reflexive verbs ending in *-iti se* (Gołąb 1968). The causative meaning is obtained when the reflexive marking is removed from the verbs which have been formed in this manner, e.g. *žena* ‘woman’ → *ženiti se* ‘to marry’ → *ženiti* ‘to marry’ + <A>. According to Gołąb (1980), this causative category is especially transparent in marking the psychological verbs in Slavic languages. In that formation type, the causative meaning has been formed subsequently, and the original meaning describes the state and follows the morphological form of the *reflexiva tantum* verbs. The argument for such an interpretation is, according to Gołąb (1968), not the criterion of the form, but of the meaning. Gołąb believed that the less complex meaning is diachronically the original one. The transitive and the causative meanings are considered to be more complex, because they have been derived from the meaning expressing a state by adding a semantic constituent ‘to cause’, and not vice versa. The syntactic-contextual causative is the fourth type, in which the verb becomes transitive and sometimes causative, if a noun in the accusative case is added to it. Several of the stated types are not productive in the contemporary Slavic languages. Plungân (2011) states that, in Russian, the morphological causative is more or less productively formed only from adjectives (*zelënyj* ‘green’ → *zelenit’* ‘to make green’); and several non-productive pairs have been preserved in the domain of verbal causatives (*gasnut’* ‘to fade’ ~ *gasit’* ‘to extinguish’, *sohnut’* ‘to become dry’ ~ *sušit’* ‘to make dry’), and even fewer unchanged pairs of the following type *gnit’* ‘to rot’ ~ *gnoit’* ‘to let rot’. The meaning of these derived morphological causatives is often idiomatic in the contemporary language, i.e. the derivational relationship can only be determined by an etymological analysis (Plungân 2011: 206). In Slavic languages, the reflexive pronoun **se* is used to morphologically indicate a decrease in the valency (Nedâlkov & Sil’nickij 1970: 40), i.e. a valency-decreasing derivation. The syntactic/semantic differences in the reflexive and the non-reflexive pair, i.e. the valency-decreasing derivation, are a widely described phenomenon in the Slavic languages (Ânko-Trinickaâ 1962; Geniušienė 1987; Oraić Rabušić 2018; Knâzev 2007; Hrdlička 2020). The position of psychological verbs in the semantic/syntactic classification of the changes caused by reflexive marking being added to the verb, is the most important area of research in this work. In the cases when the verb used to be transitive and causative in the earlier period, a diachronic change of the verb valency pattern with regards to

the verb becoming a *reflexiva tantum*, will be interpreted as the end of the productivity of the depicted diathetic change. The reduced productivity of the described pattern shows that there has been a gradual disappearance of the productivity of causative patterns in the history of language, i.e. that there has been a gradual prevalence of valency-decreasing derivation.

4. Causativity

According to the lexical valency orientation, Slavic languages belong to the few linguistic groups in which detransitivization is prevalent (Nichols, Peterson & Barnes 2004). The basic or lexical valency orientation is a typological parameter by which languages differ from each other by their preferred model of derivation, responsible for the valency change. The researchers who have postulated this typological parameter (Nichols, Peterson & Barnes 2004) consider that in the lexicon of a language there are unmarked and frequent valency patterns, related to transitivity and causativity of verbs. Languages can be sorted in different categories according to the preferred valency pattern criterion. Eighteen semantic causative pairs in 80 languages have been studied within this research. One pair member has a plain meaning, and the other has an induced meaning. An induced meaning is the meaning which differs from the plain meaning only by the additional semantic causative component (Nichols, Peterson & Barnes 2004). The parameter relies on a dichotomy between the lexical meaning and the formal manner of its marking. The dominant language type, transitive or intransitive, shows which formal, morphological means are used to express the plain verb meaning, and thus also by which other formal, morphological means the induced, causative meaning is expressed. In Slavic languages, the plain meaning is expressed by the reflexive marking, which marks the valency reducing, i.e. the detransitivization. Based on the data acquired from this research, the validity of this thesis will be examined, as well as the diachronic stability of detransitivizing basic valency orientation of Croatian as a Slavic language. A drawback of the definition of the basic lexical valency orientation parameter (Nichols, Peterson & Barnes 2004) is the fact that the transitivity and causativity categories are not completely clearly distinguished. The need for such a distinction has proven to be necessary in this research paper in the context of describing the changes of the valency properties of verbs. A sample analysis has shown

that one group of verbs has changed its meaning and/or semantic category throughout time, and the other group has lost only its causative component. In other words, the inability to form a reflexive pair is followed exclusively by the loss of a causative meaning for some verbs, and not with any other changes of meaning. In order to distinguish between the cases of causative meaning loss, it is important to explain what exactly will be considered to be a causative meaning, i.e. determine which criteria the verb has to adhere to in order to be considered as causative. The loss of a causative meaning will be shown using the logical structure system of Role and Reference Grammar (henceforth RRG, Van Valin & LaPolla 1997). Even though the depiction manner is very elaborate in RRG, the criteria for showing that a verb meaning is causative have not been described clearly enough. Matasović (2018: 104) claims that within the current *Aktionsarten* system in RRG, each reflexive verb referring to a physical activity can be described as causative and that there are no clear criteria that would distinguish reflexive activity verbs from their causative counterparts. The presence of a force which is not inherent to the participant of an activity has been suggested as a distinguishing criterion. Additional criteria for distinguishing causative and reflexive verbs will be defined along with the aforementioned criteria. For such a distinction, a causative relations' classification will be used, as conceived by the Russian semanticist, E V. Padučeva. According to Padučeva (1994, 2004), there is a correlation between causativity and taxonomic verb categories. The term taxonomic category (T-verbs) is a variant of the term *Aktionsart*, of which the goal is to encompass the possibility of the formation of verbal aspectual pairs and their transition from one thematic class to another. Thematic classes are determined according to the characteristics: 1) dynamics; 2) terminativity; 3) controllability, and 4) telicity (Padučeva 1996: 197). Padučeva (1994) highlights that causative relations can be analysed only when a verb belongs to the taxonomic categories of agentive accomplishment (*dejstviâ obyčnye*) and agentive achievement (*dejstvie s akcentom na rezul'tate*)⁹⁴ Padučeva conceptualized this as follows (1994: 2): the meaning of all verbs from the agentive category (both agentive accomplishment and agentive achievement) can be explained by the

⁹⁴ The category of agentive accomplishment is characterized by the following characteristics: [+dynamics], [-terminativity]; [+controllability], [+telicity], and the category of agentive achievement by [+dynamics], [+terminativity]; [+controllability], [+telicity]. Terminativity is equivalent to punctuality as described in Van Valin & LaPolla (1997).

following group of constituents: 1) the causator | Agent acted with a Goal; 2) causation | that caused; 3) a result matching the Goal. The three criteria which have to be fulfilled in order for the verb to be considered causative are stated below, and they are needed so that once this has been established, its predicate composition can be represented using the operator CAUSE.

(A) Transitivity. In this work, transitivity will be defined as a binary category, and not as a scalar category. Such a simplified understanding of the transitivity category has been chosen, so that a higher level of generalization can be achieved. However, one example of using a verb with an accusative argument will not be used as an example of verb transitivity, and that is the use of a verb with a cognate object. An internal or a cognate object is a ‘highly-borderline transitivity type’ (Belaj & Tanacković Faletar 2017) and cannot be considered a real argument, as it is only an adjunct, because a manner interpretation is characteristic for it (Birtić & Matas Ivanković 2009).

(B) Difference between the referents. If in a logical decomposition there are two participants of a situation, *x* and *y*, in order to make possible for the verb’s semantic structure to be represented by the operator CAUSE, the first actant *x* cannot be contained in the second argument’s composition, i.e. in the logical structure of the fundamental sentence predicate.

- (1) a. *Marija je naučila hrvatski.*
 b. ‘Marija has learned Croatian.’
 c. * [do’ (**Marija**, Ø)] CAUSE [BECOME learned’ (**Marija**, Croatian)]
- (2) a. *Marija je naučila svoje studente hrvatski.*
 b. ‘Marija has taught her students Croatian.’
 c. [do’ (Marija, Ø)] CAUSE [BECOME learned’ (students, Croatian)]

(C) The verb has to belong to the taxonomic categories of agentive accomplishment and agentive achievement.

5. Goals and methodology

The extent to which psychological *reflexiva tantum* verbs are diachronically stable will be determined in this work, as well as whether the Croatian language has changed its basic valency orientation, i.e. whether it has been detransitivized to the same degree throughout its history. It will also be

analysed whether the causative alterations of psychological verbs were more frequent in the earlier linguistic periods of Croatian. The relation of verb valency change and the verb meaning in the diachronic approach to the verb valency can, according to M. Samardžija (1994), fall into one of the three following categories: 1) the meaning of the verb changes, but this does not affect the valency; 2) the valency change occurs without a change of the meaning; 3) the valency and the meaning change simultaneously in that a verb has one valency in one meaning, and another valency in another meaning. In this work, three additional parameters will be studied along with the relation of the change of the meaning and of the arguments: transitivity, causativity and the presence of a reflexive marking with a verb. As most verbs show only slight changes of meaning with different arguments, the change of meaning criterion is somewhat extended. Smaller meaning expansion or narrowing will not be considered a change of meaning, as whether a verb has changed its thematic class will be looked into. If the meaning of the verb has changed only in that the verb no longer has a causative component, while it remains a part of the same thematic class, the meaning will not be considered to have changed. Additionally, the cases of regular polysemy, when psychological verbs switch to the classes of mental verbs or of verbs of speaking, will also not be considered a change of meaning. Verb transitivity will be analysed as a binary opposition, and the causativity criteria have been described in the previous chapter. In Table 1. all logical possibilities are stated, considering the 1) change of the presence of the reflexive marker *se* (RM); 2) thematic class to which the verb belongs (SC); 3) the morphosyntactic properties of arguments (MS); 4) transitivity (T); 5) causativity (C). These parameters are used for the typology of change and will be analysed in this work. One of the criteria for defining causativity is transitivity, suggesting that a combination where the verb is both causative and intransitive will not be found. Therefore, eight possible combinations are automatically excluded. These combinations are marked with asterisk (*).

Table 1. Possible combinations of the values of the parameters for valency change

№	RM	SC	MS	T	C
1.	+	+	+	+	+
2.	+	+	+	+	-
3.*	+	+	+	-	+
4.	+	+	+	-	-
5.	+	+	-	+	+
6.	+	+	-	+	-
7.*	+	+	-	-	+
8.	+	+	-	-	-
9.	+	-	+	+	+
10.	+	-	+	+	-
11.*	+	-	+	-	+
12.	+	-	+	-	-
13.	+	-	-	+	+
14.	+	-	-	+	-
15.*	+	-	-	-	+
16.	+	-	-	-	-
17.	-	+	+	+	+
18.	-	+	+	+	-
19.*	-	+	+	-	+
20.	-	+	+	-	-
21.	-	+	-	+	+
22.	-	+	-	+	-
23.*	-	+	-	-	+
24.	-	+	-	-	-
25.	-	-	+	+	+
26.	-	-	+	+	-
27.*	-	-	+	-	+
28.	-	-	+	-	-
29.	-	-	-	+	+
30.	-	-	-	+	-
31.*	-	-	-	-	+
32.	-	-	-	-	-

The research of Croatian from the earlier period is difficult due to a lack of language resources. Currently a corpus and a dictionary of Old-Croatian are not available online. This lack of materials is avoided by analysing Croatian in comparison to the earlier periods of other Slavic languages and by using the available lexicographic materials, which include the Old-Croatian sources. The main source was the Dictionary of Croatian or Serbian language (henceforth ARj). The earlier linguistic period of Croatian, studied as part of this work, is equivalent to the first and second period of pre-standard Croatian, as defined in Brozović (2008). The first pre-standard period includes the period from the 9th/10th century to the end of the 15th century, and the second includes the 16th century (Brozović 2008). The meaning of words as recorded in the Croatian sources prior to the 16th century was issued from the ARj. Other than that, and taking into consideration that Slavic languages had been linguistically more similar to each other in the earlier periods, the forms and meanings of etymologically equivalent verbs in Old East Slavic, Old Czech, and Old Polish have also been considered. The dictionaries and the corpora for the mentioned periods contain textual sources written prior to the 15th century. In the dictionaries of Proto-Slavic (Etymological Dictionary of Slavic Languages: Proto-Slavic Lexical Stock (henceforth ÈSSÂ), Proto-Slavic Dictionary (henceforth SP), Etymological Dictionary of the Slavic Inherited Lexicon (henceforth EDSL), and Etymological Dictionary of Croatian Language (henceforth ERHJ)) it is possible to check only the etymological matches, but it is not possible to check the data on transitivity and valency patterns, because the reconstructed forms and verb meanings are attested in some Slavic languages, but the examples of their use are not. The examples of use are prerequisites for a contextual analysis, which is, along with the lexicographic sources in the diachronic semantics, the core of the methodology of reconstruction, because it removes the researcher's subjectivity, as the person doing the research can easily include their own knowledge of the world in the linguistic data from the distant past (Raffaelli 2009: 185-189). Due to this reason, the stated dictionaries of Slavic languages and the historical sub-corpus of *The Russian National Corpus* have been used as additional sources along with the etymological dictionaries. In the Old Polish, Old East Slavic, and Old Czech dictionaries, it was first checked whether the attested verb forms have a reflexive marking and if they do not, it was checked whether they had been transitive, and whether they used to have a causative meaning. The attestation of transitive forms is necessary in order to establish whether the Slavic languages in the earlier linguistic

periods allowed for causative forms of verbs corresponding to contemporary *reflexiva tantum* verbs in Croatian.

The sample of 30 *reflexiva tantum* verbs was collected by an elimination method. In order for the verbs to be listed in the sample, they had to fit two criteria: 1) the semantic criterion, i.e. the verb had to belong to the group of psychological verbs; 2) the diachronic criterion, by which it is understood that there had to be records of the verb in the selected sources from the earlier linguistic periods. In the first step, the *reflexiva tantum* verbs were extracted, and afterwards the selection of psychological verbs were performed on this group. As two distant time periods are compared in this work, both periods can equally be used as starting points to select the *reflexiva tantum* verbs. A verb which appears in the earlier period (marked as t_1) as a *reflexivum tantum* verb is not necessarily such in the contemporary language (the contemporary language or a more recent period language state will be marked as t_2) and vice versa. A greater distribution of *reflexiva tantum* verbs in t_1 or t_2 has not been assumed previously. For that reason, the verbs have been extracted from two distant time periods in different states of the language.

In order to bypass the problem of the non-availability of a corpus and of an Old Croatian dictionary, the indices of two Old East Slavic dictionaries – Dictionary of the Russian language XI-XVII centuries (henceforth SRÂ) and Materials for the Dictionary of the Old Russian Language in the Written Records (henceforth MSR) – have been used as the starting points for excerpting verbs as they had been in the earlier linguistic periods. From these dictionaries all verbs which have their etymological equivalent in the contemporary Croatian language have been extracted. The etymological equivalence has been checked by examining three dictionaries of the Proto-Slavic language and the etymological dictionary of other Slavic languages (ÈSSÂ, SP, EDSL, and ERHJ). The extracted verbs have then been compared to the verbs found in two contemporary dictionaries of Croatian – Large Dictionary of the Croatian Standard Language (henceforth VRH) and the Croatian Language Portal (henceforth HJP) –, in order to check whether a certain verb belongs to the category of *reflexiva tantum* verbs.

Taking into account the possibility that a certain verb found in Croatian is not also necessarily present in Old East Slavic, a list of *reflexiva tantum* verbs has been taken from Ivana Oraić Rabušić's work (2018), and the list has been compared with the three Proto-Slavic dictionaries. In case the verbs were not alphabetically listed in dictionaries, it was checked whether

a certain verb occurs in the ARj in the pre-standard period of the Croatian language. For each verb, its reconstructed form was taken from the three Proto-Slavic dictionaries, and then its meanings have been taken from the Old East Slavic dictionary (SRĀ), and in case there were no records of the verb there, it was further searched in the MSR. The next step was the inclusion of the data extracted from the Old Polish and Old Czech sources. A more detailed description of the meanings and arguments is obtained from the Old Croatian verbs taken from the ARj. In case a verb has been analysed in the Croatian Verb Valency database (henceforth BHGV), the data of the BHGV have been included, and if no valency analysis was available, the meaning and the valency characteristics have been extracted from VRH and HJP. If a verb was not found in a dictionary, that dictionary's title has not been noted.

6. Results and analysis

In this section, results and analysis of 30 examined verbs are presented. For every verb, characteristics based on five parameters are provided first (reflexive marking (RM), semantic class (SC), morphosyntactic properties of arguments (MS), transitivity (T), and causativity (C)). Then, the reconstructed form of the verb is noted, and data from Old East Slavic, Old Czech, and Old Polish are presented. A detailed overview of verb valency is given only for Old Croatian. Imperfective verbs are listed first, followed by perfective verbs.

A) Imperfective verbs

1. BOJATI SE ('TO FEAR')

RM: –	SC: –	MS: +	T: –	C: –
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ÈSSĀ: **bojati* (*se*) / SP: **bojati se* / EDSL and ERHJ: **bojati se*. / In the SRĀ, OCZ and SS, neither a transitive nor a causative use of the verb has been recorded. / ARj: *Bojati se*: 1) to feel fear: a) Ø; b) <G>, the argument marks the cause of the fear; c) *od* 'from' + <G>; d) <D>; e) *za* 'for' + <A>; f) <Inf>; g) <Sent>. / BHGV: 1) to feel fear: a) Ø; b) <G>; <Sent>. 2) to fear for one's safety: a) *za* 'for' + <A>. 3) to not dare: a) <Inf>. 4) to assume something feeling afraid: a) <Sent>.

In Old Croatian, the fear for the other person's wellbeing could be expressed with dative and prepositional argument *za* 'for' + <A>, and in the contemporary language only the prepositional argument has remained. The cause was expressed by the genitive or a prepositional argument *od* 'from' + <G>. L. Hudeček (2003) has shown, using the Croatian language materials from the 17th to the middle 19th century that argument *od* 'from' + <G> accompanying verbs of speaking and thinking had been widespread in all Croatian varieties. This argument came to Croatian due to a Latin and Italian influence (Hudeček 2003). It is possible that this argument had first appeared even earlier than the 17th century and not only with verbs of speaking and thinking. The use without a reflexive marker in Old Polish and Old Croatian is possible exclusively with participles, but even when used like that, the verb is not used in transitive nor in the causative meaning.

2. DIVITI SE ('TO ADMIRE')

RM: +	SC: –	MS: +	T: +	C: +
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ÈSSÂ: **diviti* (*se*) / SP: **diviti* / ED SL: **diviti* / ERHJ: *diviti se* / SRÂ: *Diviti*: 1) to be wondering (12th-13th century): a) Ø. 2) to make one wonder: a) <A>. / ARj: *Diviti se*: to admire a) <D>, the argument expresses the cause of admiration; b) *o* 'about' + L; c) <Sent>. / BHGV: *Diviti se* 'to admire': 1) to be in awe by something beautiful or proportional: a) <D>. 2) to feel and/or express respect or admiration: a) <D>; b) <Sent>. 3) to express by words that something is considered beautiful or proportional: a) Ø.

By its origin, the verb is a denominal causative ending in *-iti*, derived from the nouns **divo* 'a wonder' (ERHJ I: 171). In SP, it is stated that the original meaning in Proto-Slavic has been to 'look at/watch someone with admiration' and that the verb had a causative meaning 'to make one awestruck'. Both meanings have been reconstructed, whereby the meaning 'to look, to watch someone with admiration' has not been found in the researched lexicographic sources, and the causative meaning has been confirmed in Old East Slavic. In Old East Slavic the verb had to express the state without the obligatory reflexive marker, and it could be both reflexive and causative. In this case, exclusively a causative constituent can be added to its meaning. In Old Croatian, the verb could have one additional prepositional argument (*o* 'about' + <L>).

3. DURITI SE ('TO SULK')

RM: +	SC: +	MS: +	T: -	C: -
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ÈSSÂ: **duriti* (*se*) / SP and ERHJ: **duriti* / EDSSL: **duriti* / SRÂ: *Durit'*: 1) to be crazy: a) Ø. In Old East Slavic, only the intransitive use has been confirmed, but in contemporary Russian, the verb is transitive and it means 'to cheat', 'to lie' + <A>. / VRH: *Duriti se*: 1) to interpret one's words as an insult and to act in accordance with it: a) Ø; b) *na* + <A>.

The verb is denominal according to its word formation process, formed by the suffix *-i-* from the adjective **durv* 'ugly' (ERHJ I: 208). According to the data from the SP, the verb appears in a transitive and causative meaning from the 18th century in Polish in the meaning 'to deceive' 'to trick' + <A>. The oldest confirmation is found in Old East Slavic. In Old East Slavic the verb does not have a reflexive marking, but it is not transitive nor causative.

4. GNUŠATI SE ('TO ABHOR')

RM: +	SC: -	MS: +	T: +	C: +
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SP: **gnōšati* / EDSSL: **gnōšati* / ERHJ: **gnōšati* (*se*) / SRÂ: *Gnušati*: 1) to detest: a) <A>. *Gnušatisâ*: 1) to detest. / VRH: *Gnušati se*: 1) to be disgusted: a) <N> + V + <D>; b) <N> + V + *nad* 'by' + <I>. 2) to abhor: a) <N> + V + <D> + <A>.

The Proto-Slavic verb **gnušati* (*se*) is derived from the verb **gnusiti* (*se*) (ERHJ I: 279). The verb **gnusiti* is derived from the noun **gnûsv* 'dirt', 'a nauseating thing' using the suffix *-i-* (ibid.). In Old East Slavic, the causative and transitive meaning of the verb *gnušati* (*se*) 'to abhor' have been confirmed. In contemporary Croatian, only the iterative verb *gnušati se* has remained, while the original form *gnusiti* has not been preserved.

5. GROZITI SE ('TO DETEST')

RM: +	SC: -	MS: +	T: +	C: +
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ÈSSÂ and SP: **groziti* / EDSSL: **groziti* / ERHJ: *groziti* (*se*) / SRÂ: *Groziti*: 1) to threaten: a) <D>. 2) to scare: a) <A>. *Grozitisâ*: 1) to threaten someone: a) <I>. 2) to abhor: a) <G>. 3) to get angry a) *na* 'with' + <A>. / OCZ: *Hroziti*: 1) to scare: a) <A>. 2) to be in fear: a) Ø, 3) to threaten: a) <D> <I>. *Groziti se*: 1) to be afraid of: a) Ø. / SP: *Grozić*: 1) to scare: a) <A>. *Grozić się*: 1) to

threaten. / ARj: *Groziti*: 1) to threaten. 2) to cry: a) Ø; b) <A>, a cognate object. 3) to detest: a) <A>. *Groziti se*: 1) to be disgusted, to be afraid. / VRH: *Groziti se*: 1) to feel great fear, to fill with discomfort and fear: a) <G>. 2) to express threats: a) <D>.

The verb was formed from the noun *groza 'dread', with a causative suffix (ERHJ I: 305). The transitive and causative meaning has been confirmed in all the earlier periods of the analysed Slavic languages. Additionally, in all the found results, the difference in the meaning is achieved using different arguments. As a psychological verb, it is used with the accusative case, and in this case the verb has a causative meaning, and when it is used with the dative, it has the meaning of a verb of speaking. In Old Croatian, the verb might have had the meaning 'to cry' and it had an internal object. In Old Croatian, the verb was used without a reflexive marking in the meaning 'to threaten', as in the other Slavic languages, which means that its use with a reflexive marking with the same meaning is from a more recent period.

6. KAJATI SE ('TO REGRET')

RM: +	SC: -	MS: +	T: +	C: -
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ÈSSÂ: **kajati* (sę) / EDSL: **kàjati* / ERHJ: **kàjati* (sę) / SRÂ: *Kaâti*: 1) to reprimand: a) <A>. 2) to confess: a) <A>. *Kaâtisâ*: to regret. / OCZ: *Kâti sě*: to regret. / SP: *Kajać* (się): 1) to be sorry for one's sins 2) to admit one's sins, to confess. It appears only as a participle without the reflexive marking. / ARj: *Kajati*: 1) to confess: a) <A>. 2) to lament: a) <A>. *Kajati se*: 1) to regret one's bad doing: a) Ø; b) *od* 'from' + <G>; c) <G>; d) *za* 'for' + <A>; e) <Sent>; f) <Inf>. / VRH: *Kajati se*: 1) to regret one's bad doing: a) *zbog* 'because of' + <A>.

The verb *kajati se* is derived from the Indo-European root **k^wōy-* (ERHJ I: 416). In the analysed sources, only in Old East Slavic there are confirmations of a transitive, but not of a causative use. In its meaning 'to confess' in Old East Slavic and Old Croatian, the verb may have had a cognate object (a sin, an evil doing), which would make it an intransitive verb. In these examples of its use, the verb acquires the meaning of a verb of speaking, to which its arguments also point. It seems that in the earlier language period, the verb could have had more arguments.

7. NADATI SE ('TO HOPE')

RM: -	SC: -	MS: +	T: -	C: -
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ÈSSÂ: **nadati* (se) / SRÂ: *Nadeâti*: 1) to count on someone, to rely on: a) *na* + <A>. *Nadeâtisâ*: 1) to hope. / ARj: *Nadati se*: 1) to expect the desired will be fulfilled: a) Ø; b) <G>; c) <D>; d) <A>; e) <N> + V + <D> + *od* 'from' + <G>; f) *u* 'in' <A>; g) <Inf>; h) <Sent>. / BHGV: *Nadati se*: 1) to hope that one's wishes will come true: a) <N> + V + <D>; b) <N> + V <Sent>; c) N + V + <I>; d) <N> + V + *u* 'in' <A>. 2) to expect: a) <N> + V + <D> + *od* 'from' + <G>.

The verb *nadati se* is a denominal verb, formed from the noun **nada* 'hope'. It has not changed its *reflexiva tantum* class. One example of use without a reflexive marking has been found in Old East Slavic, but it is from a more recent period and it neither has a transitive nor a causative meaning.

8. PONOSITI SE ('TO BE PROUD OF')

RM: +	SC: +	MS: +	T: +	C: -
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SRÂ: *Ponositi*: 1) to swear: a) <N> + V + <D> + <A>. 2) to reproach, to chastise, to reprimand: a) <D>. 3) to slander a) *na* + <A>, 4) to carry for a short period of time: a) <A>. *Ponositisâ*: 1) to winnow, *in the wind*. 2) to spread around. 3) to be proud of. / ARj: *Ponositi*: 1) to carry for a short period of time: a) <A>. *Ponositi se*: 1) to treat/ behave to: a) <I>. 2) to take pride: a) Ø; b) <I>; c) *u* 'in' <L>, d) <Sent>. / BHGV: *Ponositi se*: 1) to feel pride because of someone/something: a) <N> + V + <I>; b) <N> + V + <Sent>.

The verb is etymologically an imperfective form of the verb *ponijeti se* (ERHJ II: 168); Nowadays it is an orphan imperfective (Polančec 2018: 123). The records of this verb have been found in Old East Slavic and, without the reflexive marking, the verb has the meaning of a speaking verb 'to chastise', 'to reprimand', and of a verb of 'carrying'. When the verb is in the category of verbs of speaking, it has an argument in dative, similar to the verb *groziti* 'to abhor'. In Old Croatian the verb can also belong to the category of verbs of speaking, and that use is also marked by an argument in dative. The additional meaning, which does not appear in Old East Slavic, *postupati* 'to treat' has a similar meaning to the verb *ponašati se* 'to behave'. The reason for that similarity can be a formative and semantic relation of the verb *ponositi se* 'to be proud of' and *ponašati se* 'to behave', which was still visible in the earlier period language. The verb was transitive in Old East Slavic and Old Croatian, but it was not causative.

9. SNEBIVATI SE ('TO WONDER')

RM: +	SC: +	MS: +	T: +	C: -
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ARj: *Snebivati*: 1) to die, to wither a) Ø. 2) to ruin, to bring down: a) <A>, the face doing the action is inanimate. / *Snebivati se*: 1) to wonder: a) <D>; b) *na* 'on' <A>. 2) to disappear, to deteriorate, to waste: a) Ø. 3) to hesitate, a) Ø. VRH: *snebivati se*: 1) to be overly surprised: a) <D>.

The verb appears exclusively in Old Croatian, and not in other Slavic languages analysed in this work. Its meaning changed with time, as it had been used as a verb of integration and disintegration, similar to the verb *snebiti se*. It was a transitive verb and it had several arguments in the earlier period language. In contemporary Croatian language, it kept only its psychological meaning.

10. SRAMITI SE ('TO FEEL ASHAMED')

RM: +	SC: -	MS: +	T: +	C: +
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SRÂ: *Sramiti*: 1) to embarrass: a) <A>, 12th century. *Sramitisâ*: 1) to embarrass oneself: a) <I>; b) <G>. / ARj: *Sramiti*: 1) to embarrass: a) <A>. *Sramiti se*: a) <G>. B.) *od* 'in front of' + <I>; c) <G>; d) <Inf>; e) <Sent>. / BHGV: To feel ashamed: 1) to feel shame: a) Ø; b) *pred* 'in front of' <I>; c) <G>, d) *pred* 'in front of' <I>, e) <Inf>; f) <Sent>. 2) to not dare to do something out of shame: a) <Inf>.

The verb is denominal, formed from the noun **sôrmъ* 'shame' and the suffix *-i-* (ERHJ II: 378). In Old East Slavic, the verb could be both transitive and causative. The verb did not change its meaning through time.

11. SVIDATI SE ('TO LIKE')

RM: +	SC: +	MS: +	T: +	C: -
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SRÂ: *Svidatisâ*: 1) to encounter one another (17th century) / SS: *Zwiedzać*: 1) to watch someone: a) <A>. / ARj: *Svidati*: 1) to perform, to do: a) <A>. 2) to understand, to realize: a) <A>. *Svidati se*: 1) to appear a certain way: a) <N> + V + <D> + <A>. 2) to become aware of something: a) Ø. 3) to be likeable to someone: a) <N> V <D>. / BHGV: *Svidati se*: 1) to make a positive impression on someone, to be likeable to someone: a) <N> + V + <D>; b) <D> + V + <Adv>; c) <D> + V + <Sent>; d) <D> + V + <Inf>. 2) to become attractive to someone: a) <N> + V + <D>.

The verb *svidati se* is an imperfective pair to the verb *svidjeti se* (ERHJ II: 413). In Old Polish and Old Croatian, the meaning relationship with the verb *vidjeti* 'to see' has remained preserved. Its earliest confirmed appearance in Russian is very late and dates from the 17th century, the reflexive marking as a verb constituent has a reciprocal meaning, and the relation to the verb *vidjeti* 'to see' is also noticeable. Its semantic class changed in the way that the verb could have the following meanings: 'to seem', 'to watch', 'to understand' and 'to feel'. The verb follows the same valency pattern characteristic for its contemporary use, where it takes the meaning 'to like. In Old Polish and Old Croatian, the verb was transitive, but it was not causative.

12. STIDJETI SE ('TO FEEL ASHAMED')

RM: +	SC: -	MS: +	T: +	C: +
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SRĀ: *Styđiti*: 1) to embarrass: a) <A>. *Styđitisâ*: 1) to feel ashamed. / ARj: *Stidjeti*: 1) to embarrass: a) <A>. *Stidjeti se*: a) Ø; b) <G>; c) *od* 'from' <G>; d) *pred* 'in front of' <I>; e) <Inf>; f) <Sent>. / BHGV: *Stidjeti se*: 1) to be ashamed: a) Ø; b) *pred* 'in front of' + <I>; c) <G>; d) <Inf>; e) <Sent>. 2) to not dare to do something because of shame: a) <Inf>. 3) to hide one's private matters: a) Ø.

As in Czech, the verb was formed from the noun **stydvъ*, by adding a suffix *-i-* to it (ERHJ II: 389). In Old Czech and Old Polish, the verb has not been found in the sources, but it has in Old East Slavic, however, there are no records earlier than the 17th century. The earlier and more frequent was the verb which had a reflexive marking. In Old Croatian, one causative and transitive use of the verb has been found in the 16th century. The verb did not change its meaning, but there has been a confirmed causative and transitive use in the earlier period.

13. UZDATI SE ('TO RELY ON SOMEONE')

RM: +	SC: +	MS: +	T: +	C: +
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ERHJ: **vъzdati se* / SRĀ: *Vozdati*: 1) to give a) <A>. 2) to do, a verb of incomplete meaning which is used with nouns to express the meaning of some action: a) *vozdati vĕst* 'to give the news', to inform; b) to give revenge, to avenge. *Vozdatisâ*: 1) to surrender: a) Ø. / OCZ: *Vzdâti*: 1) to give a) <A>. *Vzdâti sĕ*: 1) to surrender: a) <D>. / SS: *Wzdać, wezdać*: 1) to gift: a) <N> + V

+ <D> + <A>. 2) to return: a) <N> + V + <D> + <A>. 3) to give: a) <N> + V + <A> + <D>. 4) to make, a verb of incomplete meaning which is used with nouns to express the meaning of some action: a) *wzdać modłø*. 5) to mark, to allot: a) <N> + V + <D> + <A>. / ARj: *Uzdati*: 1) to give: a) <N> + V + <D> + <A>. 2) to do. 3) to allow a) <A>; b) <Inf>; c) <D>. 5) to have trust in someone, to believe: a) *u* 'in' <A>; b) <Inf>. 6) to dare: a) <Inf>. *Uzdati se*: 1) to rely on, to believe in: a) Ø; b) <D>; c) *od* 'from' + <A>; d) *u* 'in' + <A>; e) <Inf>. 2) to hope, to expect a) <Inf>; b) <Sent>. / VRH: *Uzdati se*: 1) to have trust: a) *u* 'in' + <A>.

The verb was formed from the prefix **vъz* and the verb **dàti* (ERHJ II: 532). It has been found in the records of all analysed Slavic languages in their earlier linguistic periods. Its meaning is extremely extensive, and it can even occur as a verb of incomplete meaning, when it has the meaning 'to do something'. The verb might have appeared without a reflexive marking in a very early linguistic period, with the argument *u* 'in' + <A>. The verb could have other meanings when combined with an infinitive argument such as 'to expect', 'to dare', which have not been preserved in contemporary Croatian. An infinitive argument is probably responsible for the modification of the meaning 'to dare', because it is characteristic for the modal verbs *drznuti se*, *usuditi se*, *osmjeliti se*, all meaning 'to dare'.

B) The perfective verbs

14. DRZNUTI SE ('TO DARE')

RM: +	SC: -	MS: -	T: -	C: -
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ÈSSÂ: **dъrznŏti* / EDSL: **dъrznŏti* / In SRÂ, OCZ, SS and ARj: *Drznuti se*: 1) to dare: a) <Inf>. / VRH: *Drznuti se*: 1) to dare: a) <Inf>.

According to the ÈSSÂ, the verb was formed from the adjective **dъrзъ*, by adding a suffix *-nŏ-* to it (ie. **-neŏ-*). It is closely related to Old Indo-Aryan verb *dr̥ṣ-*, √5., *dr̥ṣnoti* by its meaning and formation process. The verb has been recorded in all the analysed Slavic languages with the same meaning and the same argument. Furthermore, in all of them it had the function of a modal verb and it did not have a reflexive marking. The Croatian *reflexivum tantum* verb is undoubtedly of a more recent origin. It is possible that it had started appearing as a *reflexivum tantum*, analogous to the verb *usuditi se*, which has a similar meaning. The verb did not have a transitive nor a

causative meaning, the infinitive argument has remained unchanged, and the only difference with regards to the earlier state is in the obligatory reflexive marking.

15. NASLADITI SE ('TO GLOAT')

RM: +	SC: -	MS: +	T: +	C: +
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SRÂ: *Nasladiti*: 1) to make sweet: a) <A>. 2) to fill with delight: a) <A>. *Nasladitisâ*: 1) to eat something sweet, to eat a lot of sweets: a) <G>. 2) to feel joy. / OCZ: *Nasladiti*: 1) to make sweet: a) <A>. / ARj: *Nasladiti*: 1) to make joyful, sweet: a) <A>. *Nasladiti se*: 1) to feel joy, delight: a) <I>; b) *u* 'in' + <L>; c) *od* 'from' + <G>. / VRH: *Nasladiti se*: 1) to experience delight: a) Ø. 2) to enjoy someone's misfortune: a) <I>.

The verb is composed from the prefix **na* and the verb **solditi* 'to make sweet' (ERHJ I: 677). In Old Polish this verb is not found, but in Old Czech it exists, and is used exclusively as a transitive and a causative verb. In Old East Slavic, the verb appears as a transitive and a causative verb, but also as a reflexive. In Old Croatian it can be found as a causative, transitive and a reflexive verb. The concrete use in Old Croatian with the meaning 'to taste something sweet' has not been recorded. The shift in meaning went from concrete to abstract, from 'taste something sweet' to 'enjoy', and according to ERHJ it had occurred in the Proto Slavic language.

16. OKAMENITI SE ('TO FREEZE IN SHOCK')

RM: +	SC: -	MS: +	T: +	C: +
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SRÂ: *Okameniti*: 1) to become hard as a rock: a) <A>. *Okamenitisâ*: 1) to get petrified: Ø. 2) to lose all feelings; 3) to become immobile. / OCZ: *Okameněti*: 1) to turn into stone. / ARj: *Okameniti*: 1) to turn into stone: a) <A>. *Okameniti se*: 1) to turn into stone: a) Ø. 2) to become emotionless. 3) to become immobile: a) *od* 'from' + <G>. / VRH: *Okameniti se*: 1) to turn into stone: a) Ø. 2) to stiffen from being overcome with feelings: a) Ø. 3) to stop changing: a) Ø. 4) to lose liveliness and creativity: a) Ø. 5) to be astonished, to be surprised a) Ø; b) *od* 'from' + <G>.

In Old East Slavic and Old Croatian, the verb was transitive and causative and it was used both with the literal and metaphorical meaning. There are no records of the verb having a metaphorical meaning in transitive use. The verb marks an emotional state exclusively in its reflexive use.

17. OSLADITI SE ('TO ACQUIRE A TASTE FOR SOMETHING')

RM: +	SC: -	MS: +	T: +	C: +
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SRĀ: *Osladiti*: 1) to make pleasant: a) <A>. 2) to bring joy a) <A>. *Osladitisâ*: 1) to become sweet. / OCZ: *Osladiti*: 1) to make sweet: a) <A>. *Osladiti sě*: 1) to become sweet. / SS: *Oslodzić*: 1) to make something sweet. / ARj: *Osladiti*: 1) to make something sweet: a) <A>. *Osladiti se*: 1) to become sweet: a) Ø. 2) to get enticed by: a) *na* 'on' + <A>. / HJP: *Osladiti se*: 1) to eat something sweet: a) <N> + V + <I>. 2) to like something: a) <N> + V + <D>.

The verb has been found in all earlier periods of the analysed Slavic languages. It was used as a transitive and a causative verb. Its meaning as a psychological verb 'to like something' is certainly from a more recent period of the Croatian language. The meaning development is assumed to be as follows: 1) *nasladiti* 'to make something sweet/lovely' → 2) *nasladiti se* 'to become sweet' → 3) *nasladiti se* 'to like something'. In the second meaning under it has the same valency frame as the verbs *sviđjeti se*, *sviđati se* 'to like'.

18. POKAJATI SE ('TO REPENT')

RM: +	SC: -	MS: +	T: +	C: -
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ERHJ: **pokajati se* / SRĀ: *Pokaâti*: 1) to confess: a) <A>, the object is animate. *Pokaâtisâ*: 1) to repent. / OCZ: *Pokâti sě*: 1) to repent: a) <G>. 2) to confess one's sins, to confess. / SS: *Pokajać się*: 1) to repent: a) <G>. / ARj: *Pokajati se*: 1) to feel guilt and remorse because of something bad one has done: a) Ø; b) <G>; c) *od* 'from' + <G>; d) *za* 'for' + <A>; e) <Sent>. / VRH: *Pokajati se*: 1) to feel guilt and remorse because of something bad one has done.

The verb is made of the prefix **po* and the verb **kajati se* 'to regret' (ERHJ II: 156). A transitive use has only been recorded in Old East Slavic, as late as the 15th century, and only for one example. This points to the fact that the transitive use was not the primary one. In all of the earlier linguistic periods of the analysed languages, it is possible to have an argument in the genitive case with the reflexive verbs. However, in the examples found in the sources, there is often a noun which marks the content of the spoken words ('a sin'), i.e. the cognate object. When accompanied by the cognate object 'a sin', the verb transitions into the semantic class of the verbs of speaking.

19. PRIČINITI SE ('TO SEE SOMETHING WHICH IS NOT THERE')

RM: +	SC: +	MS: +	T: +	C: +
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SRÂ: *Pričiniti*: 1) to add something: a) <A>. 2) to make, to build: a) <A>. *Pričinitisâ*: 1) to get dressed: a) *v* 'in' + <A>. 2) to happen. / OCZ: *Pričiniti*: 1) to get close: a) <N> + V + <A> + *k* 'to' + <D>. 2) to add: a) <N> + V + <A> + <D>. 3) to give: a) <N> + V + *k* + <D>. 4) to make bigger, to expand. *Pričiniti sě*: 1) to get close to: a) (*k*) + <D>. 2) to join: a) (*k*) + <D>. 3) to focus on: a) <D>, 4) to make an effort: a) *k* 'to' + <D>; b) *o* 'about' + <L>. / SS: *Przyczynić*: 1) to add: a) <N> + V + <A> + <D>. 2) to confirm: a) <A>. 3) to incite. *Przyczynić się*: 1) to advocate: *za* 'for' + <I>. 2) to cooperate. 3) to undertake. / ARj: *Pričiniti*: 1) to make, to build. <A>. *Pričiniti se*: 1) to happen: a) Ø. 2) to seem. / VRH: *Pričiniti se*: 1) to have a feeling that something which is not there can be seen or heard, to be seeing things: a) <N> + V + <D>.

In all of the earlier linguistic periods of the analysed languages, the verb kept the meaning 'to make', from which it has been derived, and in each of the compared languages it has developed very different meanings. The verb often denotes the meaning 'to add' and 'to build'. In Croatian, from the 18th century onwards, it has become a psychological verb, which means that this meaning is secondary.

20. PRISJETITI SE ('TO RECALL')

RM: +	SC: -	MS: +	T: +	C: +
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SRÂ: *Prisjetiti*: 1) to visit a) <A>. 2) to loathe: a) <A>. 3) to remind: a) <A>. / VRH: *Prisjetiti se*: 1) to bring to memory something from the past a) <G>; b) <Sent>.

The verb is formed from the prefix **pri* and the verb **sjetiti se*. The verb **sjetiti se* has probably been derived from the same Indo-European root **sh₂ey-t-* 'rage, pain' as the noun **sěta* 'sadness' (ERHJ II: 156). The only language in which the verb has been recorded is Old East Slavic and the verb had a transitive and a causative meaning there. In the contemporary Croatian language, it appears only with a reflexive marking.

21. SAŽALITI SE ('TO FEEL SORRY FOR')

RM: +	SC: -	MS: +	T: +	C: -
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ERHJ: **sŕžaliti* / SRĀ: *Sžaliti*, *sžaleti* 1) to enrage someone: a) <A>. 2) to embitter: a) <A>. *Sžalitisâ*, *sžalitisâ*: 1) to become bitter. 2) to become enraged. 3) to get sorry for: a) <D>; b) *o* 'about' + <L>. / OCZ: *Sžěleti*: 1) to feel sorry for: a) <A> *Sžěleti sě*: 2) to feel sorry for: a) <D>; b) *o* 'about' + <L>. / ARj: *Sažaliti*: 1) to feel sorry for: a) <A> *Sažaliti se*: a) <D>; b) *radi* 'for' + <G>; c) *nad* 'over' + <I>. / HJP: *Sažaliti se*: 1) to feel remorse, compassion: a) *na* 'on' + <A>. 2) to get sad: a) *nad* 'over' + <I>.

In Old East Slavic, the verb marked an emotional state, not the feeling of being sorry for something or someone, but it does express other feelings, such as anger and bitterness. In Old East Slavic, Old Czech and Old Croatian, the verb was transitive. According to the analysed data, the use with a reflexive marking appeared earlier.

22. SMILOVATI SE ('TO SHOW MERCY')

RM: +	SC: -	MS: +	T: +	C: -
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SRĀ: *Smilovati*: 1) to take pity: a) \emptyset . *Smilovatisâ*: 1) to show mercy: a) *o* 'about' + <L>; b) \emptyset . / OCZ: *Smilovati*: 1) to take pity a) <A> *Smilovati sě*: 2) feel sorry: a) for <I>. / ARj: *Smilovati*: 1) to pardon: a) <A>. *Smilovati se*: a) \emptyset ; b) <D>; c) *na* 'on' + <A>; d) *vrh*, *vrhu* + <G> 'above, over, on top of'.

The verb has been derived from **sŕmiliti se* (ERHJ II: 362). In Old East Slavic, Old Croatian and Old Czech, the verb was transitive, but a causative use cannot be established as the meaning 'to make one merciful' has not been found. In Old East Slavic, only the use without a direct object has been found. In Old Croatian, the number of possible arguments was much greater. The preposition *vrh*, *vrhu* 'above' was used with verbs of speaking and thinking in Croatian from the 17th to the middle 19th century. That preposition, used with a genitive, is a translation of the Latin prepositional argument *super* + <Abl> (Hudeček 2003: 117-118). In the contemporary language, this prepositional argument has not been preserved.

23. SMUČITI SE ('TO GET NAUSEATED BY')

RM: +	SC: +	MS: +	T: +	C: +
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ERHJ: **smučiti* / SRĀ: *Smučiti*: 1) to struggle: a) <A>. / OCZ: *Zmučiti*: 1) to struggle: a) <A>. / SS: *Smęcić*: 1) to torture: a) <A>. 2) to make sad: a) <A>; b) <G>; c) *przez* + <A>; d) *za* 'for' + <A>, 3) to agitate. *Smęcić się*: 1) to become sad. 2) to struggle. / VRH: *Smučiti se*: 1) to feel nauseated in one's stomach. 2) to feeling loathing or disgust for something: <N> + V + <D>.

In Old East Slavic, Old Czech and Old Polish, the records of the verb in its transitive meaning 'to torture someone' have been found. In the ARj, the verb has not been found, so nothing can be claimed about the change of the argument or the meaning. In contemporary Croatian, it has the meaning of a psychological verb and it denotes a physical reaction to an uncomfortable external sensation. The verb has the same valency pattern as the verbs *sviđjeti se* and *gaditi se*. As in the earlier linguistic periods of the studied Slavic languages, the meaning as a psychological verb is not found, so it can be concluded that it has developed more recently.

24. SNEBITI SE ('TO WONDER')

RM: +	SC: +	MS: +	T: +	C: -
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ERHJ: **snebyti* / ARj: *Snebiti*: 1) to astonish: a) <A>, there is only one record of the verb being used without a reflexive marking, in the 17th/18th century. *Snebiti se*: 1) to become scared, to become confused, to become bewildered: a) Ø. 2) to disappear: a) Ø. / HJP: *Snebiti se*: 1) to become very unpleasantly surprised: a) Ø.

The verb has not been found in any of the earlier linguistic periods of Slavic languages, except for Croatian. In Old Croatian, the verb was polysemous and it did not belong only to the psychological verbs' class, but also to the verbs of appearance and disappearance (*zbiti se*, 'to happen' *pojavititi se* 'to appear').

25. STRPJETI SE ('TO PATIENTLY WAIT')

RM: +	SC: -	MS: +	T: +	C: -
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ERHJ: **sčtrpěti* (*se*) / SRĀ: *Sterpěti*: 1) to withstand: a) <A>. 2) to endure: a) <A>. *Sterpětisâ*: 1) It can be endured, a faceless use as part of a saying. / OCZ: *Strpěti*: 1) to endure, to withstand: a) <A>. *Strpěti se*: 1) to show the ability to

endure: a) *s* ‘with’ + <I>. / SS: Ścierpieć, ścirpieć, ścirzpieć: 1) to endure: a) <A>. / ARj: *Strpjeti*: 1) to withstand: a) <A>. 2) to wait, to withstand a) Ø; b) <A>. *Strpjeti se*: 1) to endure: a) Ø. 2) to allow: a) <N> + V + <D> + <A>. 3) to preserve. / HJP: *Strpjeti se*: 1) to patiently endure something or to wait for something to happen: a) Ø; b) *do* ‘until’ + <G>.

The verb has been found in all studied Slavic languages, and it was transitive in all of them, while it was not causative in any of them. In Old Czech and Old East Slavic, the verb appears with a reflexive marking, but its use is faceless in Old East Slavic, and marking behaviour in Old Czech. Some aspect of the discomfort experienced by the experiencer is expressed by an argument in the dative case. The verb became a *reflexiva tantum* verb in the more recent linguistic history, while its earlier use is transitive. In contemporary Croatian, the verb stopped being transitive and it is mostly used without an object.

26. SVIDJETI SE (‘TO LIKE’)

RM: +	SC: +	MS: +	T: +	C: –
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ERHJ: **sъviděti se* / SRĀ: *Sviděti, s'viděti*: 1) to see: a) <A>. *Svidětisâ*: 1) to encounter: a) <I>. / SS: *Zwidzić się*: 1) to appear, to seem: a) Ø; 2) to approve, to agree: a) Ø. / ARj: *Svidjeti se*: 1) to become aware of something: a) Ø. 2) to be aware: a) <G>. 3) to think, to decide: Ø. 4) to remember: a) <Sent>. 5) to be likeable to someone: a) <N> + V + <D>. 6) to humble yourself: a) Ø. / BHGV: *Svidjeti se*: 1) to make a positive impression on someone a) <N> + V <D>; b) <D> + V + <Adv>; c) <D> + V + <Sent>; d) <D> + V + <Inf>. 2) to become attractive: a) <N> + V + <D>.

Among the researched languages, the verb was transitive only in Old East Slavic, but it was not causative. The transitive use is a more recent one, and it keeps the semantic relation to the verb *vidjeti* ‘to see’, from which this verb has been derived by prefixation. In Old Polish, the verb belongs to the *reflexiva tantum* verb class. It used to have a reciprocal meaning and the meaning of a verb of perception. In Old Croatian, the verb was also polysemic, but in all its meanings it belonged to psychological verbs.

27. UMILITI SE (‘TO BECOME LIKED BY SOMEONE’)

RM: +	SC: +	MS: +	T: +	C: +
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ERHJ: **umiliti (se)* / MSR: *Umiliti*: 1) to make somebody feel mercy for one, to arouse someone’s mercy: a) <A>. *Umilitisâ*: 1) to grow sad: a) Ø. 2) to show

mercy to someone: a) $v + \langle A \rangle$, 12. 3) to be delighted: a) $\langle I \rangle$. / ARj: *Umiliti*: 1) to alleviate, to silence: a) $\langle A \rangle$. 2) to make dear: a) $\langle A \rangle$. 3) to humble a) $\langle A \rangle$. *Umiliti se*: 1) to flatter someone to make them like one: a) $\langle N \rangle + V + \langle D \rangle$. 2) to calm down: a) \emptyset . 3) to humiliate oneself: a) \emptyset . / VRH: *Umiliti se*: 1) to become dear to someone, to get in their good books: a) $\langle N \rangle + V + \langle D \rangle$.

The verb is composed of the prefix **u-* and the verb **militi*, which was formed by a denominal verb formation process from the adjective **milъ* (ERHJ II: 509). It has been confirmed in Old East Slavic and Old Croatian. It was transitive and causative.

28. USUDITI SE ('TO DARE')

RM: +	SC: +	MS: +	T: +	C: -
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ERHJ: **usŏditi se* / SRÂ: *Vsuditi*: 1) to allot. *Vsuditisâ*: 1) to be a part of a certain composition: a) $v + \langle A \rangle$. / OCZ: *Usúditi*: 1) ordain. / ARj: *Usuditi*: 1) to condemn, to ordain: $\langle A \rangle$. *Usuditi se*: 1) to have the courage to do something a) $\langle \text{Inf} \rangle$; b) $\langle \text{Sent} \rangle$. / BHGV: *Usuditi se*: 1) to have the daring or the courage to do something: a) $\langle \text{Inf} \rangle$.

In Old East Slavic, Old Czech, and Old Croatian, the verb was transitive, but not causative. In the transitive use, the verb meaning can be depicted as a sum of the meanings of the prefixes and the root. In the contemporary Croatian language, the verb became modal and it can appear exclusively with an argument in the infinitive, and its meaning is almost the same as the meaning of the verb *drznuti se* 'to dare'. Based on the fact that, in other Slavic languages, in the earlier linguistic periods, the verb has been recorded in transitive use, and that in that transitive use it has preserved meaning close to the meaning of its verb root, its *reflexiva tantum* semantic class is a more recent development, as well as its meaning 'to have courage to do something'.

29. UZDRŽATI SE ('TO ABSTAIN')

RM: +	SC: +	MS: +	T: +	C: -
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ERHJ: **vъzdvъržati (se)* / SRÂ: *V”zd’ržati, v”zderžati, v”zdr”žati*: 1) to withhold, to stop: a) $\langle A \rangle$. 2) to support, raise: a) $\langle A \rangle$. 3) to hold: a) $\langle A \rangle$. *V”zd’ržatisâ, v”zderžatisâ, v”zdr”žatisâ*: 1) to abstain from: $\langle G \rangle$. / OCZ: *Vzdržěti*: 1) to keep: a) $\langle A \rangle$. *Vzdržěti sě*: 1) to abstain from a) $\langle G \rangle$. / SS: *Wdzierzeć, wdzirzeć*: 1)

to keep, to imprison <A>. *Wzdzierżec się*: 1) to abstain from: a) *ot* + <G>. 2) to withstand: a) <A>. / ARj: *Uzdržati*: 1) to keep: a) <A>. 2) to preserve: <A>. 3) to receive: a) <A>. 4) to carry out, to fulfil: a) <A>. 5) to feed, to withstand, to refrain from: a) <A>. 6) to contain: a) <A>. *Uzdržati se*: 1) to linger: a) Ø. 2) subsist, to survive: a) Ø. 3) to withhold, to resist something: a) *od* ‘from’ + <G>; b) <Sent>; c) <G>. / HJP: *Uzdržati se*: 1) to manage to control oneself a) Ø. 2) to abstain from something: a) *od* ‘from’ + <G>. 3) to keep silent about something: a) Ø.

In the earlier periods of all Slavic languages, the verb was transitive. It had multiple meanings, all related to the verb *držati* ‘to hold’. In all the analysed languages, the meaning *zadržati* ‘to keep’, and the other meanings have been derived from it. Similarly, the meaning it has when used with a reflexive marking, *ustegnuti se* ‘to withhold’, has also been confirmed in all languages and the meaning of the reflexive marking is related to the true reflexivity, i.e. the meaning can be described as ‘to keep oneself away from something’.

30. ZALJUBITI SE (‘TO FALL IN LOVE’)

RM: +	SC: -	MS: +	T: +	C: -
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ERHJ: **zaljubiti* / SRĀ: *Zalûbiti*: 1) to come to love someone: a) <A>. / OCZ: *Zalûbiti, zalíbiti*: 1) to come to love someone: a) <A>. 2) to promise. *Zalûbiti sě*: 1) to like: a) <N> + V + <D> + <A>. 2) to fall in love: a) *v* + <L>: to fall in love. / SS: *Zalubić*: 1) to make an agreement: a) *s* + <I>. 2) to come to love someone: a) <A>. *Zalubić się*: 1) to commit to someone. / ARj: *Zaljubiti*: 1) to come to love someone: a) <A>. *Zaljubiti se*: 1) to start loving: a) *u* ‘in’ + <A>; b) *s* ‘with’ + <A>. 2) to start loving one another. / BHGV: *Zaljubiti se*: 1) to start loving: a) Ø; b) *u* ‘in’ + <A>. 2) to reciprocate being in love. 3) to get carried away by something: a) *u* ‘in’ + <A>.

In all earlier periods of the researched languages, the verb was transitive and non-causative and its meaning was ‘to come to love’. In Old Czech and Old Polish, its one possible meaning was also ‘to commit to’. In Old Czech, it also had the meaning ‘to like’, and in that meaning it had the same valency pattern as the verb *svidjeti se* ‘to like’ in Croatian. In the earlier period of Croatian, the verb had a greater number of arguments, but it also had the same meanings as in the contemporary language, the only change is the fact that the transitive meaning has not been preserved in the contemporary Croatian language.

Table 2 summarizes changes in five parameters (reflexive marking (RM), semantic class (SC), morphosyntactic properties of arguments (MS), transitivity (T) and causativity (C)) for every verb included in the research. Pluses (“+”) and minuses (“-”) in Table 2 mark the change of a parameter. The analysis of every individual verb explains which kind of change happened.

Table 2. Classification of the *reflexiva tantum* psychological verbs according to the parameters for valency change

№		RM	SC	MS	T	C
IMPERFECTIVE VERBS						
1.	BOJATI SE (‘TO FEAR’)	-	-	+	-	-
2.	DIVITI SE (‘TO ADMIRE’)	+	-	+	+	+
3.	DURITI SE (‘TO SULK’)	+	+	+	-	-
4.	GNUŠATI SE (‘TO ABHOR’)	+	-	+	+	+
5.	GROZITI SE (‘TO DETEST’)	+	-	+	+	+
6.	KAJATI SE (‘TO REGRET’)	+	-	+	+	-
7.	NADATI SE (‘TO HOPE’)	-	-	+	-	-
8.	PONOSITI SE (‘TO BE PROUD OF’)	+	+	+	+	-
9.	SNEBIVATI SE (‘TO WONDER’)	+	+	+	+	-
10.	SRAMITI SE (‘TO FEEL ASHAMED’)	+	-	+	+	+
11.	SVIĐATI SE (‘TO LIKE’)	+	+	+	+	-
12.	STIDJETI SE (‘TO FEEL ASHAMED’)	+	-	+	+	+
13.	UZDATI SE (‘TO RELY ON SOMEONE’)	+	+	+	+	+
PERFECTIVE VERBS						
14.	DRZNUTI SE (‘TO DARE’)	+	-	-	-	-
15.	NASLADITI SE (‘TO GLOAT’)	+	-	+	+	+
16.	OKAMENITI SE (‘TO FREEZE IN SHOCK’)	+	-	+	+	+
17.	OSLADITI SE (‘TO ACQUIRE A TASTE FOR SOMETHING’)	+	-	+	+	+
18.	POKAJATI SE (‘TO REPENT’)	+	-	+	+	-
19.	PRIČINITI SE (‘TO SEE SOMETHING WHICH IS NOT THERE’)	+	+	+	+	+
20.	PRISJETITI SE (‘TO RECALL’)	+	-	+	+	+
21.	SAŽALITI SE (‘TO FEEL SORRY FOR’)	+	-	+	+	-

22.	SMILOVATI SE ('TO SHOW MERCY')	+	-	+	+	-
23.	SMUČITI SE ('TO GET NAUSEATED BY')	+	+	+	+	+
24.	SNEBITI SE ('TO WONDER')	+	+	+	+	-
25.	STRPJETI SE ('TO PATIENTLY WAIT')	+	-	+	+	-
26.	SVIDJETI SE ('TO LIKE')	+	+	+	+	-
27.	UMILITI SE ('TO BECOME LIKED BY SOMEONE')	+	+	+	+	+
28.	USUDITI SE ('TO DARE')	+	+	+	+	-
29.	UZDRŽATI SE ('TO ABSTAIN')	+	+	+	+	-
30.	ZALJUBITI SE ('TO FALL IN LOVE')	+	-	+	+	-

7. Discussion

From the possible combinations of the values of the parameters for valency change shown in Table 1, from 32 available combinations of default parameters, only seven have been confirmed. Since the shift of verbs from transitive to intransitive also includes the change of the verb arguments' composition, it can be assumed that there are rare or unconfirmed cases of a reflexive marker change, while the same verb arguments are preserved. In Table 3 the seven attested combinations of parameters and the number of verbs displaying the relevant combination are shown.

Table 3. Attested combinations of parameters for valency change in *reflexive tantum* psychological verbs

№	RM	SC	MS	T	C	
1.	+	+	+	+	+	4
2.	+	+	+	+	-	7
3.	+	+	+	-	-	1
4.	+	-	+	+	+	9
5.	+	-	+	+	-	6
6.	+	-	-	-	-	1
7.	-	-	+	-	-	2

A plus in Table 3 means that the following parameter changed over time, and a minus means that it remained the same. It is essential to highlight that change is understood as loss and as the appearance of a feature. In the

Discussion for every group of verbs, it is explained what kind of change happened. The seven groups can be divided into two groups according to the criterion of the presence of transitivity and then also a causative use in the analysed Slavic languages. Three groups (Table 3, rows 3, 6 and 7) contain four verbs that have not changed their transitivity feature. The verb *drznuti se* (Table 3, row 6) changed only the presence of a reflexive marker. In all of older examined Slavic languages, the verb was used without the reflexive marker. The verb *duriti se* (Table 3, row 3) has been found without a reflexive marking only in Old East Slavic, where it marks a state, and in all other examined older periods of Slavic languages, it is used with the reflexive marker. A transitive and a causative form of the verb *duriti se* exist in contemporary Russian, Polish and Ukrainian, but it has not been recorded in the earlier periods of the analysed Slavic languages. The verbs *bojati se* 'to fear' and *nadati se* 'to hope' belong to the third group (Table 3, row 7), as they have not changed their meaning nor their semantic class, but only their arguments.

The fact that only two verbs have been *reflexiva tantum* throughout their entire linguistic history, and that the other *reflexiva tantum* verbs, 28 of them, could be used in their transitive meaning, points to the disappearance of transitivity. The opposite case, in which primarily *reflexiva tantum* verbs become transitive verbs, has not been found in Croatian. However, it is possible that there have been such examples, but have not been recorded due to the methodology of excerpting verbs which has been used. Furthermore, only one semantic class of verbs has been included in the research, i.e. not all *reflexiva tantum* verbs have been included. Regardless of this lack, a tendency for formal reflexivization can be noticed in modern Croatian. The described situation concerns first and foremost Croatian and not necessarily the other Slavic languages. The dominance of a certain tendency in other Slavic languages could be determined with research similar to this one, in a sample including a greater number of languages.

Four groups consist of verbs whose transitivity has changed. Among these four groups, we can further distinguish between the verbs which have been causative in the earlier linguistic period and those which have not. In the category of verbs that used to be causative, there is an additional difference among those which have belonged to different semantic classes and have changed their meaning significantly. Verbs that changed all parameters are shown in row 1 in Table 3. In that group, only one causative verb (*pričiniti se* 'to appear to be') has not been derived from a noun or an adjective, and the rest (*smučiti se*, *umiliti se*, *uzdati se*) have.

The verbs whose meaning has changed by losing a causative component (Table 3, row 4) belong to a similar group. The verbs of this type are the most numerous verb group in this sample. In that group, almost all verbs, except for the verb *gnušati se*, which is historically derived from the verb **gnusiti se* (ERHJ I: 279), are formed from a denominal base (*diviti se*, *groziti se*, *sramiti se*, *stidjeti se*, *nasladiti se*, *okameniti se*, *osladiti se*) and the causative suffix. Among the recorded verbs, 11 of them fit the causative meaning formation pattern from the adjective or nominal verb base by adding a suffix *-i-*, described by Gołąb (1968), which is highly productive in Russian as well (Plungân 2001). This pattern shows the reduced productivity of causative dichotomies in the contemporary Croatian language, in comparison to the earlier period verb states in the analysed Slavic languages, which can be depicted by the following schema:

- (3) $\{(\text{groziti 'abhor' [do' (x, \emptyset)] CAUSE [feel' (y), [zgrožen 'abhorred']])\} t_1$
 $\rightarrow \{\text{groziti se 'to be abhorred' (x, y)}\} t_1/t_2$

The schema shows that the decausative meaning, formally marked by a reflexive marking, was present in both time periods, and the causative meaning exclusively in the earlier period. The causative formation reduced productivity, and it can be characteristic only for contemporary Croatian and no other contemporary Slavic languages. Based on the results acquired exclusively for Croatian, it is not possible to draw conclusions on the reduced productivity of this pattern in the history of Slavic languages in general, and the possibility that Slavic languages differ from each other by this parameter, needs to be taken into consideration. The results of the preliminary comparison of Slavic denominal verbs which have entered causative pairs do not give unambiguous answers about the diachronic primary state of the (non)reflexive valency pattern. However, some conclusions can still be made. Most non-prefixed verbs which follow the described pattern (*duriti se*, *diviti se*, *sramiti se*, *stidjeti se*) show diachronic primary state of the non-causative form in the analysed sources. The non-prefixed verb *groziti se* 'to abhor' does not show a notable diachronic primary state for neither of the causative pair members. A scheme opposite to the one applicable to the Croatian language verbs is relevant for these verbs:

- (4) $\{\text{stiditi se 'to be ashamed' (x, y)}\} t_1 \rightarrow \{(\text{stiditi 'to shame' [do' (x, \emptyset)] CAUSE [to feel (y), [posramljen 'ashamed']])\} t_1/t_2$

Prefixed verbs more often than non-prefixed verbs had transitive and causative forms (*prisjetiti se*, *smučiti se*, *umiliti se*). Also, in some cases, prefixed verbs do not show a diachronic primary transitive or causative form (*nasladiti se*, *okameniti se*, *osladiti se*). This points to the fact that the non-prefixed psychological verbs could be diachronically first in their reflexive form and decausative meaning, and the prefixed could be diachronically first in their transitive and causative meaning. Such a relationship is not unusual, because verb prefixation is used as a syntactic means of the transitivity of certain verb groups (Krysko 2006: 292). The verbs which changed meaning kept the meaning of the base from which they had been derived in the earlier linguistic period, so that, for example, the verb *smučiti se* ‘to be disgusted by’ had not had the meaning of the feeling of disgust recorded, but only of a short period of torturing the second actant in the semantic role of the patient.

The verbs which changed transitivity, but not causativity, can be classified into two groups. The first group includes the verbs which have changed their semantic class (Table 3, row 2). The verb *ponositi se* used to have the meaning ‘to move’ and ‘to put’, in its transitive use (Brač & Bošnjak Botica 2015: 114) and it could make a transition to the category of verbs of communication. The change in meaning is marked by an argument in dative which denotes the face at which what is being said is directed. The verb *groziti se* is the same. The difference is in the fact that in contemporary Croatian, the verb *ponositi se* can no longer be used as a verb of speaking, and the verb *groziti se* can. The verb *uzdržati se* used to a verb of ‘keeping’ and ‘holding’ in its transitive use (Brač & Bošnjak Botica 2015), and in its reflexive use, preserved in the contemporary Croatian language, the verb is exclusively psychological. The verb *usuditi se* ‘to dare’ used to have a transitive performative meaning ‘to condemn’, and in the contemporary language, it marks the meaning ‘to have courage’ and it exclusively has an infinitive argument and a modal meaning. The reflexive marking with all three stated verbs can be related to the meaning of the reflexive pronoun, which is unusual for the other verbs. The verbs *snebiti se* and *snebivati se* could have belonged to the group of verbs of occurrence (Mikelić Preradović 2020: 79) characterized by complete decausativity, i.e. by a non-specified cause of the action. Such shift in meaning is probably the result of their similarity to the verbs *zbiti se* ‘to happen’, *zbivati se* ‘to be happening’. The verbs *svidjeti se* and *svidati se* belonged to the semantic class verbs of perception in the earlier periods and to the group with which the verbs of perception have a relation of regular polysemy – the verbs of thinking, learning, and knowing.

Such a transition is possible due to their preservation of the relationship with the non-prefixed verbs *vidjeti* and *viđati*.

The second subgroup of verbs which changed transitivity, but not causativity, (Table 3, row 5) includes the verbs which have not changed their semantic class. The transitive use of the verb *kajati se*, 'to regret', has been recorded only in Old East Slavic in one example from the 12th century, which shows that the transitive use is secondary. A similar scenario is also applicable to the verb *pokajati se* 'to repent', for which the reflexive use has only been recorded in Old East Slavic in the 15th century, and in the other Slavic languages the verb was intransitive prior to the 15th century. The verb *strpjeti se* 'to patiently wait' used to be transitive, as it had an argument in the accusative case which marked the discomfort felt by the experiencer, and such a use was undoubtedly its primary one. In contemporary Croatian, the verb became a *reflexiva tantum* verb and it almost completely lost nearly every possibility of having a direct object added and the verb can now only have an adjunct. The verbs *sažaliti se*, *smilovati se*, *zaljubiti se* have changed their valency pattern by preserving the semantic role of the patient, i.e. the face on which the action is performed, but in the way that the patient is not expressed by a direct object in the contemporary language, but with a dative argument instead (*sažaliti se*, *smilovati se*) or a prepositional argument (*zaljubiti se*). Other than that, the verbs *smilovati se* and *sažaliti se* have a pronounced semantic role of the cause in the contemporary language, which is expressed by a prepositional argument.

Verb arguments in some verb groups have not been studied in detail due to several reasons. Most sources in the ARj, from which the data have been extracted, are written in Chakavian dialects, which is not the direct ancestor to the contemporary Croatian language, and also, in the dictionary itself, the arguments are not described in the equally detailed manner for all dictionary entries. However, some more general conclusions can be made. It has been noticed that in the earlier period of Croatian, verbs could have more arguments, as 25 verbs had more arguments in Old Croatian, not including the accusative argument which is the transitivity criterion, while for four verbs there are no data, and only one verb, *svidjeti se* 'to like', in the meaning of a psychological verb, had a fewer number of arguments when compared to the contemporary language. Other than that, more frequent bare arguments have been noticed with some verbs. The analysis of the five parameters of psychological verbs makes it possible to create a hierarchy of their frequency and diachronic stability in Croatian. The properties of arguments marking are the least stable, only one verb *drznuti se* 'to dare' has been found with

unchanged arguments. All the other verbs changed their arguments, usually by reducing their number. The reflexive marking is the second least stable feature. Only two verbs have remained part of the *reflexiva tantum* category throughout time. Most verbs which could be marked without a reflexive marking, 26 of them, were transitive. Thirteen verbs in total might have been causative in the studied sample and none of them preserved causativity in the contemporary language. The thematic class to which the verb belongs has shown to be the most stable parameter. Twelve verbs belonged to the psychological verbs' group the entire time. This does not include the regular polysemy cases, typical for the psychological verbs thematic class.

8. Conclusion

In the history of Croatian, the psychological verbs used to be able to more frequently enter reflexive oppositions, which shows that most *reflexiva tantum* verbs have a more recent origin. In other Slavic languages, the given category does not have to be so widespread nor typical for psychological verbs. The chronology of the development of the *reflexiva tantum* category could in theory be reconstructed, so that the earliest recorded use of the non-prefixed psychological verbs derived from nouns and adjectives using the suffix *-i-* is recognized as a reflexive one, followed by a reflexive marking drop, which indicates the secondary, causative meaning. This causative meaning would afterwards have gradually been lost throughout the history of Croatian, which does not necessarily have to also be applicable to other Slavic languages, for which there may not have occurred a loss of causative opposition. Prefixed verbs, as a rule, originally had a transitive meaning or the primary state of transitivity has not been confirmed, which can be related to the transitivity feature, which appears as a result of the prefixation. The analysis of psychological verbs points to the fact that in the earlier linguistic history, Croatian used to be a little more transitive than it is today. However, future research should also include verbs other than the psychological ones, as it would make this statement more reliable. The position of Croatian within the framework of other Slavic languages, which can show, to a varying degree, the characteristics of detransitivizing languages, remains uncovered. Reflexive marking, as a formal indicator, usually, but not always, marks the end of transitivity, and it can sometimes entail a change in the causative meaning. The data from other Slavic languages need to be compared in future research, and other semantic classes should be included.

Appendix

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List of abbreviations

<A>	accusative
<Abl>	ablative
C	causativity
<D>	dative
<G>	genitive
<I>	instrumental
<Inf>	infinitive
<L>	locative
MS	morphosyntactic properties of arguments
<N>	nominative
Ø	absence of an object
RM	reflexive marker <i>se</i>
SC	thematic class
<Sent>	sentence
T	transitivity
V	verb

Acronyms for lexicographic sources

ARj	Daničić <i>et al.</i> (1880–1976).
ERHJ	Matasović <i>et al.</i> (2016–21).
ÈSSÂ	Trubačëv (1974–).
BHGV	Baza hrvatskih glagolskih valencija.
HJP	Hrvatski jezični portal.
EDSL	Derksen (2008).
OCZ	<i>Slovníky staré češtiny</i> .
SP	Sławski (1974–2001).
SS	Urbańczyk (1953–2002).
MSR	Sreznevskij (1893–1912).
SRÂ	Avanesov (1975–).
VRH	Jokić, Ljiljana (2015).

References

- Ânko-Trinickaâ, N. A. (1962). *Vozvratnye glagoly v sovremennom russkom âzyke*. Moskva: Izdatel'tstvo Akademii Nauk SSSR.
- Apresjan, Ju. D. (1974). Regular Polisemy. *Linguistics*, 12 (143), 5–32.
- Avanesov, P. I. (ed) (1975–). *Slovar' russkogo âzyka XI–XVII vv*. Moskva: Nauka.
- Baza hrvatskih glagolskih valencija. (Available online: <http://valencije.ihjj.hr/>, Accessed on 2022-09-02)
- Belaj, B. (2001). Prototipno-kontekstualna analiza povratnih glagola u hrvatskom jeziku. *Suvremena lingvistika*, 51/52(1/2), 1–11.
- Belaj, B. & Tanacković Faletar, G. (2017). *Kognitivna gramatika hrvatskoga jezika. Sintaksa jednostavne rečenice*. Zagreb: Disput.
- Beram breviaries (Available online: <https://beram.stin.hr/>, Accessed on 2023-08-12).
- Birtiç, M. & Matas Ivanković I. (2009). Akuzativne dopune uz neprijelazne glagole: što su unutrašnji objekti? *Rasprave: Časopis Instituta za hrvatski jezik i jezikoslovlje*, 35(1), 1–19.
- Brač, I. & Bošnjak Botica, T. (2015). Semantička razdioba glagola u Bazi hrvatskih glagolskih valencija. *Fluminensia*, 1, 105–121.
- Brozović, D. (2008). *Povijest hrvatskog književnog i standardnog jezika*. Zagreb: Školska knjiga.
- Daniçić, Đ., Valavac, M., Budmani P., Maretiç, T., Bosanac, S., Grdeniç, D., Hamm, J. & Jedvaj, J. (eds) (1880–1976). *Rječnik hrvatskoga ili srpskoga jezika*. Zagreb: JAZU.
- Derksen, R. (2008). *Etymological Dictionary of the Slavic Inherited Lexicon*. Leiden: Brill.
- Geniušienė, E. (1987). *The Typology of Reflexives*. Berlin: Mouton de Gruyter.
- Gołab, Z. 1968. The grammar of Slavic causatives. In: Kucera, H. (ed) *American Contributions to the Sixth International Congress of Slavists*, 71–94. The Hague: Mouton.
- Grimshaw, J. (1990). *Argument structure*. Cambridge (MA): MIT Press.
- Hansack, E., Hansen, B., Wald, V., Horvat, M. & Perić Gavrančić, S. (2016). Regensburški dijakronijski korpus hrvatskoga jezika – CroDi. *Rasprave: Časopis Instituta za hrvatski jezik i jezikoslovlje*, 42 (1), 1–19.
- Hrdlička, M. (2020). *Kategorija povratnosti u hrvatskom i poljskom jeziku*. PhD thesis, University of Zagreb.
- Hrvatski jezični portal. (Available online: <https://hjp.znanje.hr/>, Accessed on 2022-09-29).
- Hudeček, L. (2003). Dopune glagolima govorenja, mišljenja i srodnih značenja u hrvatskome književnom jeziku od 17. do polovice 19. stoljeća – strani sintaktički utjecaji. *Rasprave Instituta za hrvatski jezik i jezikoslovlje*, 29, 103–129.
- Jokić, Lj. (ed). (2015). *Veliki rječnik hrvatskoga standardnog jezika*. Zagreb: Školska knjiga.
- Knâzev, Ū. (2007). *Grammatičeskaâ semantika: Russkij âzyk v tipologiçeskoj perspektive*. Moskva: Âzyki slavânskikh kul'tur.
- Krysko, V. V. (2006). *Istoriçeskij sintaksis russkogo âzyka. Ob"ekt i perehodnost'*. Moskva: Izdatel'skij centr "Azbukovnik".
- Levin, B. & Rappaport Hovav, M. (2005). *Argument Realization*. Cambridge: Cambridge University Press.
- Ljubešić, N. & Klubička, F. (2014). {bs,hr,sr}WaC – Web Corpora of Bosnian, Croatian and Serbian. In: Bildhauer, F. & Schäfer, R. (eds) *Proceedings of the 9th Web as Corpus Workshop (WaC-9)*, 29-35. Association for Computational Linguistics.

- Matasović, R. (2018). Aspect and Aktionsart in Slavic, Inflection and Derivation in RRG. In: Kailuweit, R.; Künkel, L. & Staudinger, E. (eds) *Applying and expanding role and reference grammar*, 95–109. Freiburg: Freiburg Institute for Advanced Studies, Albert-Ludwigs-Universität Freiburg.
- Matasović, R., Ivšić Majić, D., Pronk, T. & Brozović Rončević, D. (2016–2021). *Etimološki rječnik hrvatskoga jezika, I-II*. Zagreb: Institut za hrvatski jezik i jezikoslovlje.
- Mikelić Preradović, N. (2020). *CROVALLEX: Valencijski leksikon glagola hrvatskoga jezika*. Zagreb: Zavod za informacijske studije.
- Nedâlkov, V. P. & Sil'nickij, G. G. (1969). Tipologija morfoložičeskogo i leksičeskogo kauzativov. In: Holodovič A. A. (ed) *Tipologija kauzativnyh konstrukcij: Morfoložičeskij kauzativ*, 20–51. Leningrad: Nauka.
- Nichols, J., Peterson, D. A. & Barnes, J. (2004). Transitivity and detransitivizing languages. *Linguistic Typology*, 8(2), 149–211.
- Oraić Rabušić, I. (2018). *Struktura povratnih glagola i konstrukcije sa se u hrvatskome jeziku*. Zagreb: Institut za hrvatski jezik i jezikoslovlje.
- Padučeva, E. V. (1994). Tipy kauzal'nyh otnošenij v semantičeskoj strukture leksemy. *Russian Linguistics*, 18(1), 1–16.
- Padučeva, E. V. (1996). *Semantičeskie issledovaniâ: semantika vremeni i vida v ruskom âzyke, semantika narrativa*. Moskva: Âzyki ruskoj kul'tury.
- Padučeva, E. V. (2004). *Dinamičeskie modeli v semantike sintaksisa*. Moskva: Âzyki slavânskoj kul'tury.
- Pesetsky, D. (1995). *Zero Syntax: Experiencers and Cascades*. Cambridge (MA): MIT Press.
- Plungân, V. A. (2011). *Vvedenie v grammatičeskuû semantiku: grammatičeskie značeniâ i grammatičeskie sistemy âzykov mira*. Moskva: Rossijskij gosudarsvennyj gumanitarnyj universitet.
- Polančec, J. (2018) Osamostaljeni izvedeni nesvršeni glagoli u hrvatskom jeziku. *Suvremena lingvistika*, 44(85), 113–138.
- Raffaelli, I. (2009). *Značenje kroz vrijeme. Poglavlja iz dijakronijske semantike*. Zagreb: Disput.
- Samardžija, M. (1994). Valentnost i semantičke mijene hrvatskih glagola. *Fluminensia*, 6(1/2), 49–53.
- Slovníky staré češtiny*. (Available online: <https://vokabular.ujc.cas.cz/hledani.aspx>, Accessed on 2022–08–05).
- Sreznevskij, I. I. (1893–1912). Materialy dlâ slovarâ drevne-russkago âzyka po pis'mennym "pamâtnikam". Sankt-Peterburg: Tipografiâ imperatorskoj akademij nauk".
- The Russian National Corpus*. (Available online: <https://ruscorpora.ru/>, Accessed on 2022–08–05).
- Trubačev, O. N. (ed) (1974–). *Ètimologičeskij slovar' slavânskih âzykov*. Praslavânskij leksičeskij fond, t. 1-42. Moskva: Nauka.
- Urbańczyk, S. (ed) (1953–2002). *Słownik staropolski, t. 1-11*. Kraków: Instytut Języka Polskiego Polskiej Akademii Nauk.
- Van Gelderen, E. (2018). *The Diachrony of Meaning. Aspect and Argument Structure*. New York: Routledge.
- Van Valin, R. D. & LaPolla, R. J. (1997). *Syntax: Structure, Meaning, and Function*. Cambridge: Cambridge University Press.