

Research Article

Ivana Brač* and Matea Birtić

Valency patterns of manner of speaking verbs in Croatian

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Abstract: Manner of speaking verbs denote the transfer of a message through speech, emphasizing the volume, intensity, comprehensibility, psychophysical condition of the speaker, and/or the impression that the speaker leaves on the hearer. In this article, verbs are semantically divided into four subclasses: 1. Verbs with emphasis on volume, 2. verbs of incomprehensible speaking, 3. verbs of meaningless speaking and complaining, and 4. verbs with emphasis on emotional component. Their syntactic peculiarities have been extensively researched in English, while no special attention has been paid to these verbs in Croatian. It is stated that in Croatian they are monovalent verbs. However, these verbs can be bivalent, and even trivalent. The recipient can be expressed by a dative complement within all four semantic subclasses. With the verbs of loud speaking and verbs with negative emotions, it can be expressed by a prepositional complement *na* ‘at’ + accusative and *za* ‘after’ + instrumental. The theme can be expressed by a quotation and a clausal complement, a prepositional complement *o* ‘about’ + locative, an accusative complement, sometimes a prepositional complement *protiv* ‘against’ + genitive, *za* ‘for’ + accusative, and with fewer verbs with prepositional phrases *za* ‘for’ + instrumental or *nad* ‘over’ + instrumental. Interestingly, there are certain restrictions for the complements’ combination within the same clause, which are described in more detail in the article.

Keywords: verb valency, manner of speaking verbs, complements, adjuncts, theme, recipient, Croatian

1 Introduction

Verbs of speaking are some of the most frequent verbs in the Croatian language, as speaking is a fundamental human ability and activity (Žic Fuchs and Tuđman Vuković 2001, 141).¹ To indicate the manner in which someone is speaking, adverbials are typically used with these verbs, e.g. *glasno* ‘loudly’ in (1a).² However, some verbs that mean ‘to transfer ideas, information, messages through speech’ have an additional meaning component of manner incorporated into a lexeme (1b–1d). These verbs belong to a class of manner of speaking verbs (MoS).

1 In the Croatian web corpus (Ljubešić and Klubička 2016), the verbs *reći* ‘say, tell’, *kazati* ‘say, tell’, and *govoriti* ‘speak’ are among the 20 most frequent verbs.

2 All examples are from the Croatian web corpus. Some have been shortened for clarity, but the reader can retrieve whole sentences and their corresponding context directly from the corpus. In some examples, the context is kept in English translation in brackets. Examples marked with letters *b*, *c*, *d*, or *e* are permutations of an example marked with an *a*.

* **Corresponding author: Ivana Brač**, Department of Croatian Standard Language, Institute of Croatian Language and Linguistics, Zagreb 10000, Croatia, e-mail: ibrac@ihjj.hr

Matea Birtić: Department of General Linguistics, Institute of Croatian Language and Linguistics, Zagreb 10000, Croatia, e-mail: mbirtic@ihjj.hr

(1a)

On glasno govori ljudima da ne jedu meso.
 he loudly tells people.DAT.PL that NEG eat meat
 ‘He loudly tells people not to eat meat.’

(1b)

On viče ljudima da ne jedu meso.
 he shouts people.DAT.PL that NEG eat meat
 ‘He shouts to people not to eat meat.’

(1c)

On šapće ljudima da ne jedu meso.
 he whispers people.DAT.PL that NEG eat meat
 ‘He whispers to people not to eat meat.’

(1d)

On kmeči ljudima da ne jedu meso.
 he cries people.DAT.PL that NEG eat meat
 ‘He cries to people not to eat meat.’

In (1a), without the adverbial, we would not have information about the manner in which a message is being conveyed. In (1b), the verb *vikati* ‘jell’ provides information about the volume at which the message is being delivered. Similarly, in (1c), the verb *šaptati* ‘whisper’ conveys a different manner of speaking, i.e., speaking in a quiet voice. In (1d), the verb choice emphasizes that the speaker is unhappy with people eating meat. Therefore, the choice of the verb can play a significant role in shaping our understanding of a speech situation.

Additionally, sometimes the choice of a complement can affect our perception of a speech situation. In (1b), the reason for using a loud voice is not clear, it could be to overcome noise or to warn the people that meat is poisoned or because the speaker is angry, etc. However, in (1e), it is clearer that the speaker is upset or angry and that one is directing one’s words in a hostile or angry manner, which is expressed by selecting the complement with the preposition *na* ‘at’. Selecting the complement that refers to a recipient in the form of a prepositional phrase introduced with the preposition *na* ‘at’ is one of the characteristics that separates standard verbs of speaking from the MoS.

(1e)

On viče na ljude da ne jedu meso.
 he shouts at people.ACC.PL that NEG eat meat
 ‘He shouts at people not to eat meat.’

This article aims to describe the semantic differences between prototypical verbs of speaking and MoS in Croatian, as well as the differences within the class of MoS, and to determine whether they affect valency patterns, i.e., the syntactic behavior of verbs. Only verbs used communicatively will be analyzed, i.e., when the goal is to convey a message. In this article, the introduction is followed by a presentation of related research of MoS in other languages and their description in Croatian in Section 2. The methodology and data collection process are outlined in Section 3. In Section 4, the article presents the division of verbs into subclasses, more precisely, the division with respect to volume into the following: 1. Verbs of loud and quiet speaking (Section 4.1), 2. verbs of incomprehensible speaking (Section 4.2), 3. verbs of meaningless speaking and complaining (Section 4.3), and 4. verbs with an emotional component (Section 4.4). The description of these classes is followed by a discussion in Section 5, which contains observations about their semantic and syntactic differences and similarities, as well as the potential of combining complements. The conclusion and ideas for future work are presented in Section 6.

2 Related work

MoS are a class of verbs that denote the transfer of a message through speech, describing the physical characteristics of the speech act itself (cf. Zwickey 1971), but they also express the emotional state of the speaker and the impression the speaker leaves on the hearer. MoS were singled out as a separate class by Zwicky (1971) who listed 20 properties, some of which distinguish these verbs from standard verbs of speaking. Mufwene (1978, as cited in Levin 1993, 18) states that the problem is that MoS share these properties with verbs of other classes, which is why it is questionable whether they should be separated into a special class. Instead, he suggests that the class should be determined based on a particular semantic component common to those verbs. Levin (1993) identifies 77 MoS in English as a subset of verbs of communication, many of which belong to the class of verbs of sound emission, verbs of sound made by animals, and nonverbal expression.

MoS are interesting to linguists because of their semantic peculiarities, especially in relation to difficulties in finding equivalents in other languages (for Spanish and English, see Rojo and Valenzuela 2001; for Italian and English, see Mastrofini 2013). In English, they have been studied mostly because of their syntactic peculiarities. Unlike other verbs of communication, they do not have the possibility of double object constructions, allegedly, they do not have the possibility of extraction of complements and adjuncts from their post-verbal complement clause, and the complementizer cannot be dropped in the subordinate clause, etc. (see Zwicky 1971, Stowell 1981, Lehrer 1988, Pinker 1989, Levin 1993, Pesetsky 1995, Doherty 2000, Erteschik-Shir 2017, de Cuba 2018, Stoica 2019). However, other languages do not share all these features with English, for example, Romanian, German, Italian (see Stoica 2020), as well as Croatian.

The question is whether it is justified to separate them into a special class of verbs. To be able to answer to that question in Croatian, it is necessary to describe the main characteristics of verbs of speaking, which follows in the next section.

2.1 Verbs of speaking in Croatian

In order to determine whether MoS constitute a distinct class of verbs, it is important to examine the valency patterns of verbs of speaking. While this research is not primarily focused on verbs of speaking, a description of the prototypical verbs of speaking (*reći* ‘say, tell’, *govoriti* ‘speak, talk’, *pričati* ‘talk’, *kazati* ‘say, tell’) in their transitive use, i.e., when they mean ‘to transfer ideas, information or a message through speech’, has been mostly conducted based on previous literature. Additionally, to confirm the use of certain prepositions, the Sketch Engine’s Word Sketch tool was utilized, resulting in observations that have not been described in the consulted literature. However, it has to be emphasized that further corpus research is necessary for a more comprehensive analysis of verbs of speaking.

Regarding the complements with the verbs of speaking, the theme, i.e., the message, can be expressed by the (2) clausal complement, (3) quotation, (4) accusative complement, and prepositional complements (5–7). The clausal complement can be introduced with the conjunctions *da* ‘that’ and *kako* ‘that’, which are interchangeable with the verbs of speaking, and *neka* ‘~let’, which is used when the goal is to encourage the actant to perform an activity (see Katičić 2002, 365–6, Belaj and Tanacković Faletar 2020, 292). Embedded interrogative clauses are introduced by *wh*-words (e.g., *što* ‘what’, *tko* ‘who’, *koliko* ‘how many’, *zašto* ‘why’, *gdje* ‘where’) (see Raguž 1997, 420, Pranjković 2001, 66, Barić et al. 1995, 515–8, Belaj and Tanacković Faletar 2020, 290–1). As well as a clausal complement, verbs of speaking have quotation as a complement which emphasizes the content of the message (cf. Tuđman Vuković 2010, 205).

(2)

Roglić kaže da je zadovoljan suradnjom s Martimexom (...)

Roglić says that is satisfied cooperation with Martimex

‘Roglić says that he is satisfied with the cooperation with Martimex (...)’

(3)
Igrali smo protiv jake i teške ekipe (...), rekao je
 played AUX against strong and difficult team said AUX
trener Gospića.
 couch Gospić
 ‘‘We played against a strong and difficult team (...), said the couch of Gospić.’

The theme can be expressed by the accusative complement, which usually denotes a narrative-related expression (*istina* ‘truth’, *laž* ‘lie’, *riječ* ‘word’, *glupost* ‘nonsense’ with the verbs *reći* ‘say, tell’, *govoriti* ‘speak, talk’, *kazati* ‘say, tell’; *priča* ‘story’, *vic* ‘joke’, *bajka* ‘fairytale’, *glupost* ‘nonsense with the verb *pričati* ‘talk’).

(4)
Bojao se kazati istinu.
 afraid REFL tell truth.ACC.SG
 ‘He was afraid to tell the truth.’

Also, the theme can be expressed by the prepositional complement *o* ‘about’ + locative, which implies knowledge of something (Tuđman Vuković 2010, 89), of condition or some event related to the entity that is expressed with the noun in the locative case (Pranjkić 2001, 64). Pranjkić (2007) stated that this prepositional complement cannot be used with the verbs *kazati* and *reći* ‘say, tell’ without contextualization of the topic (5a), which is expressed by additional accusative (5b) or clausal complement (5c).

(5a)
**O vremenu je rekao.*
 about weather.LOC.SG AUX said
 ‘*He said about the weather.’

(5b)
O vremenu je rekao sve.
 about weather.LOC.SG AUX said everything.ACC
 ‘He said everything about the weather.’

(5c)
O vremenu je rekao da će biti lijepo.
 about weather.LOC.SG AUX said that will be nice
 ‘About the weather, he said that it is going to be nice.’

The prepositional phrase *za* ‘for’ + accusative can also be used to express the theme, i.e. the topic of the conversation. Similarly, contextualization of the topic is necessary (6) or it has to be known from the context (7) (cf. Ivić 1972, as cited in Štrbac 2010).

(6)
Bartol Kašić (...) kaže za ovu crkvu da ima krov.
 Bartol Kašić says for this.ACC.SG church.ACC.SG that has roof
 ‘Bartol Kašić (...) says about this church that it has a roof.’

(7)
Ne znam zašto sam vam uopće rekla za bebū.
 NEG know why AUX you.DAT.PL at_all said for baby.ACC.SG
 ‘I don’t know why I told you about the baby at all.’

Even though it is not described in the literature on Croatian verbs of speaking, as far as we know, it can be noticed that with the verbs *govoriti* ‘speak, talk’ (8) and *pričati* ‘talk’ (9) the prepositional complement *protiv* ‘against’ + genitive can be used. It seems that with the verbs *reći* ‘say, tell’ (10) and *kazati* ‘say, tell’ (11) this complement can be used if it is accompanied by a nominal in the accusative, mostly pronouns *nešto* ‘something’, *ništa* ‘nothing’, *svašta* ‘everything’, *riječ* ‘word’, etc.

(8)

Robi govori protiv Eu projekata (...)
 Robi talks against Eu projects.GEN.PL
 ‘Robi is talking against EU projects (...)’

(9)

Sigurno pričate protiv mene.
 surely talk against me.GEN.SG
 ‘You are talking against me for sure.’

(10a)

Ja mu nikada nisam jednu riječ rekla
 I him.DAT.SG never AUX.NEG single.ACC.SG word.ACC.SG said
protiv njega.
 against him.GEN.SG
 ‘I never said a single word against him.’

(10b)

**Ja mu nikada nisam rekla protiv njega.*
 I him.DAT.SG never AUX.NEG said against him.GEN.SG
 ‘*I never said against him.’

(11a)

(...) neka mi netko nešto kaže protiv velikih
 let me.DAT.SG someone something.ACC tells against big.GEN.PL
trgovačkih centara (...)
 shopping.GEN.PL centers.GEN.PL
 ‘(...) let someone tell me something against big shopping centers (...)’

(11b)

**(...) neka mi netko kaže protiv velikih trgovačkih centara (...)*
 let me.DAT.SG someone tells against big.GEN.PL shopping.GEN.PL centers.GEN.PL
 ‘*(...) let someone tell me against big shopping centers (...)’

Regarding the recipient, it is stated that it can be expressed by the dative complement with all verbs, but, according to Tudman Vuković (2010), they differ regarding frequency. More precisely, the recipient in the dative is rarely expressed with the verbs *govoriti* ‘speak, talk’ and *kazati* ‘say, tell’ and more frequently with the verbs *pričati* ‘talk’ and *reći* ‘say, tell’.³

The recipient expressed with the prepositional phrase *na* ‘at’ + accusative does not occur with the prototypical verbs of speaking, while it can occur with MoS, when it is used to emphasize the inequality of the participants (Tudman Vuković 2010, 147).

³ With these verbs of speaking, the prepositional phrase *za* ‘for’ + accusative can be used if it is expressed that the speaker is giving a statement or similar to the media (i).

(i)

Zato smo se odlučili (...), kaže za Deutsche Welle Martin Faulstich (...)
 because_of AUX REFL decided says for Deutsche Well Martin Faulstich
 ‘That’s why we decided (...), Martin Faulstich told Deutsche Welle (...)’

MoS differ semantically from the verbs of speaking since they additionally express the intensity, volume, comprehensibility, quality of the voice, the speaker's psychophysical state, and/or the impression that the speaker leaves on the hearer. Tuđman Vuković (2010, 159) concludes that focusing on the manner of pronunciation, whether it is loudness or comprehensibility, is a specificity that distinguishes these verbs from the prototypical verbs of speaking. We can add that they differ in that most often the emotional component is expressed. In this article, we will also investigate if they differ by their valency patterns, which is described in Sections 4 and 5.

2.2 Classification of MoS

When describing and classifying the MoS, the semantic components are taken into account, which primarily refer to the auditory characteristics of the voice and the effect it has on the recipient of the message or the participant who listens to that voice. These verbs contain emotional and judgmental components. A list of physical auditory and semantic–pragmatic categories can be found in the literature. Thus, pitch, volume, speed, and rhythm are classified as physical auditory characteristics, and semantic–pragmatic components are directionality, persistence, formality, speaker's attitude, speaker's intention, effect on the hearer (Vergaro et al. 2014, Sandford 2017).

Tuđman Vuković (2010) divided English verbs of speaking into five groups, and we classify three of them as MoS in this article:⁴

1. Verbs of shouting and whispering – related to the volume of speaking. The emphasis is on the speaker's voice. They are subdivided into: a. verbs of shouting and b. verbs of whispering. According to Tuđman Vuković (2010), there are two causes for loud speaking, the first of which are environmental reasons, i.e., the spatial distance between the speaker and the hearer, or noise, and the second is the psychosomatic state of the speaker, i.e., positive emotions (e.g., excitement or joy) and negative emotions (e.g., fear or anger) (*shout, yell, holler*). Verbs of whispering (*whisper*) are related to a quiet voice which signifies intimacy and friendship (Tuđman Vuković 2010, 169).
2. Verbs of stammering and mumbling – related to the manner of pronunciation. The emphasis is on the speaker's voice. They are subdivided into: a. verbs of stammering, which imply that speech is intermittent; phonemes or syllables are repeated due to speech difficulties or excitement (*stammer, stutter*), and b. verbs of mumbling, which imply incomprehensible speech as a result of insufficient mouth opening (*mumble, murmur, mutter*) (Tuđman Vuković 2010, 152–3).
3. Verbs of babbling – related to the informal nature of speaking, long and boring speaking. The emphasis is on the content of the message, the speaker or the hearer. They are subdivided into: a. verbs of babbling (*babble, blather*) and verbs of chatting (*chit-chat, gossip*).

Tuđman Vuković (2010, 173–89) also describes verbs that are primarily not related to speaking, but due to metonymical (verbs of breathing, verbs of laughing, verbs of crying, verbs of spitting, and other verbs of physiological processes) and metaphorical (verbs of sounds made by animals, verbs of sound emission, verbs of movement and force) extensions can be used as verbs of speaking. She analyzed the semantics and valency patterns of verbs in English, while Croatian verbs are not in the author's focus.⁵

⁴ Other two classes are general verbs of speaking, which are related to the process of speaking in general or to the fact that the speaker utters a message toward the hearer (*speak, talk, say, tell*), and verbs of conversation, which are related to communication between two or more participants (*converse, discuss, confer, dialogue, parley*). In Serbian, Štrbac (2010) distinguishes between typical verbs of speaking (*govoriti* 'speak', *reći, kazati* 'say, tell') and verbs of speaking with the differential meaning components: content (*brbljati* 'babble'); manner (*gundati* 'grumble', *mrmljati* 'mumble'); pitch (*vikati* 'yell', *galamiti* 'clamor', *šaptati* 'whisper'), and intention (*narediti* 'order', *tvrditi* 'claim', *objasniti* 'explain').

⁵ Tuđman Vuković (2010) analyzed six prototypical verbs of speaking in Croatian (*govoriti* 'speak, talk', *pričati* 'talk', *kazati, reći, velim* 'say, tell', *razgovarati* 'converse, talk').

In Croatian, Katičić (2002), within the chapter on declarative clauses, divided verbs of speaking into several subclasses, among others, into a subclass of verbs of speaking that denote evaluation of the content (e.g., *tresnuti* ‘slap = blabber’, *odbrusiti* ‘snap’), verbs that denote voice (e.g., *vikati* ‘yell’, *plakati* ‘cry’, *mucati* ‘stutter’, *gundati* ‘grumble’), verbs that denote making sounds (e.g., *piskati* ‘beep’, *lajati* ‘bark’), and verbs with extremely negative evaluation (e.g., *srati* ‘shit’, *prđiti* ‘fart’, *jebati* ‘fuck’). However, he did not offer an analysis of MoS.

For Croatian, Mikelić Preradović (2020, 62) provided a list of 71 verbs that correspond to the class *speaking_manner* described by Levin (1993), but their semantic and syntactic features have not been thoroughly investigated. Mikelić Preradović (2020, 62) states that the MoS are intransitive and have no complements. That is often the case because the emphasis is only on the manner the message is conveyed, i.e., the voice or impression that the speaker leaves on the hearer or recipient, so the recipient and the message itself are often neglected. However, sometimes a message, i.e., the theme, and the participant of the activity to which the message is addressed, i.e., the recipient, can be expressed.⁶

2.3 Research questions

This research is the first thorough research of semantic differences between MoS and the prototypical verbs of speaking and among MoS themselves. It is also the first detailed analysis of valency patterns of MoS in Croatian, following the valency theory described in Section 2.4. Therefore, we have focused our research around the following questions:

RQ1: Is the semantic component of a manner, which MoS have, reflected in the syntactic structure, i.e., does it change the valency patterns of MoS in comparison to the prototypical verbs of speaking?

RQ2: Is it justified to separate MoS into a special class of verbs?

RQ3: When MoS are transferred from some other semantic class (e.g., verbs of sounds made by animals, verbs of breathing, psych-verbs), do their valency patterns match with valency patterns of prototypical verbs of speaking class or with their original semantic class? How does this relate to the hypothesis that the same semantic class of verbs shows the same syntactic behavior?

2.4 Theoretical framework

The description and analysis of MoS in this article rely on two different foundations. First, the description of Croatian MoS is inspired by previous studies of English MoS (e.g., Zwicky 1971, Levin 1993) and other European MoS described in English (Stoica 2020), presented in Section 2.

Second, the analysis of sentences in this article is in accordance with valency theory (Tesnière 1959/2015) and dependency grammars (Engel 2009, Helbig 1992, Ágel 2000), in which a verb is a precondition for the sentence structure (Ágel and Fischer 2010, 224). The verb is a central element of the sentence and appears in the environment of several dependents. Each dependent can be either a complement (in valency and dependency relation to the verb) or an adjunct (in dependency relation to the verb) (Tesnière 1959/2015). Only complements are selected by the verb and their form is mostly determined by the verb. The same type of complements appears with the same classes of verbs. Therefore, linguists working in the dependency theory aim to identify the classes of complements characteristic for a specific language (cf. Engel 2009, Schumacher et al. 2004, Šojat 2008, Samardžija 1986, for German and Croatian). Our analysis relies on the dependency

⁶ Verbs of speaking are also monovalent when the emphasis is on the process of conveying the message, but then they occur with an adverb that expresses the manner (*govoriti glasno* ‘speak loudly’, *govoriti isprekidano* ‘speak intermittently’) (see Pranjković 2007, 134).

descriptions suggested for Croatian (Samardžija 1986, Šojat 2008), especially on the analysis by means of ten classes of complements suggested in Birtić et al. (2018). The analysis is influenced by the aforementioned authors, but also in a great deal by Schumacher et al. (2004).

Complements of all Croatian verbs can be described as nominative, genitive, dative, accusative, instrumental, prepositional, adverbial, predicative, infinitive, and clausal complements (Birtić et al. 2018, 6). Some of them can be both obligatory and optional (e.g., dative, instrumental, adverbial), and some are only obligatory (e.g., nominative, predicative). In this research, we operate with the clausal, accusative, dative, and prepositional complements. Although in Birtić et al. (2018), quotation is a subclass of clausal complement, in this article, we singled it out as a separate complement to show more clearly verb's valency patterns. The realization of an accusative complement is often a noun, an indefinite (e.g., *nešto* 'something'), or a negative pronoun (e.g., *ništa* 'anything') that refers to a result of speaking. Dative complements are reserved for recipients with MoS, as in many other languages, while prepositional complements can be a realization of both recipients and the topic of the conversation, i.e., theme. Clausal complements are a realization of the theme, i.e., the topic or the content of the conversation.

3 Methodology

The collection of data has started from the list of 71 verbs provided by Mikelić Preradović (2020).⁷ Since some MoS are recorded in Mikelić Preradović (2020) only as either imperfective or perfective verbs, and since Croatian, as Slavic language, has almost regularly both verb forms, we have added missing aspectual counterparts of the verbs from the list (e.g., *dahnuti* 'gasp', *doviknuti* 'shout', *gaknuti* 'quak', *kokodaknuti* 'cluck', *zarežati* 'growl').

We have also added some verbs with MoS meaning to our list after reading the literature on MoS in other languages, e.g., English (Zwickey 1971, Levin 1993, Lehrer 1988, Levin et al. 1997, de Cuba 2018, etc.), Spanish (Rojo and Valenzuela 2001), Italian (Mastrofini 2013), Romanian (Stoica 2020), and consulting Croatian monolingual dictionaries (*Rječnik hrvatskoga jezika* (Šonje 2000), *Hrvatski jezični portal* (HJP), *Školski rječnik* (Birtić et al. 2012)) for verb synonyms (e.g., *brundati* 'growl, mutter', *bubnuti* 'slam = blabber', *drečati* 'yell', *frfljati* 'gibber', *galamiti* 'clamour', *klepetati* 'clatter', *tresnuti* 'slap = blabber', *uzdisati* 'sigh', *zvocati* 'ding, nag'). Thus, a list of 122 verbs was obtained.

After completing the list with aspectual pairs and new verbs from the dictionaries and literature, all verbs from the list were tested in the *Croatian Web Corpus* (Ljubešić and Klubička 2016) in Sketch Engine (Kilgarriff et al. 2014) in order to confirm whether they are used as MoS. As a result, some verbs were excluded from the list since they have not been confirmed to be used as MoS, e.g., *hujati* 'bluster' is used only as a verb of sound emission and verb of movement. It has to be emphasized that it is possible that some verbs can be used as MoS, but the corpus does not contain those examples. Additionally, we are aware that our list is not a completed list of all verbs with MoS meaning. The list of verbs divided into subclasses presented in Subsection 4 is given in Appendix.⁸

⁷ The research does not include verbs that primarily belong to the following verb classes: verbs of transfer of a message, contact verbs, inquire verbs, say verbs, verbs of instrument of communication, complain verbs, advise verbs, confess verbs, and reply verbs that are part of the group verbs of communication (see Levin 1993, Mikelić Preradović 2020). Likewise, verbs of nonverbal communication or spontaneous reactions are not analyzed, but only verbs with a communicative purpose. We choose to use the term verbs of speaking as a general term to be able to compare characteristics of MoS to other verbs of speaking. The term is also found in some standard descriptions of Croatian as a separate class of verbs (Katičić 2002) or as a part of a larger class (verbs of expression, Težak and Babić 2005).

⁸ The table has three columns: 1. Verb semantic subclass, 2. Croatian verb and its English translation, and 3. Source. If a verb is listed in Mikelić Preradović (2020), it is marked with MP. If we found a verb with the MoS meaning in *Školski rječnik* (Birtić et al. 2012) or *Hrvatski jezični portal*, it is marked with ŠK or HJP. If it is found in the literature or just came to our mind, it is marked with OS (other sources). If a verb is not attested in the corpus as MoS, in the first column is written NA (not attested).

This study is corpus-based. All examples are taken from the corpus, but parts of sentences that are not relevant to our study were shortened. For more frequent verbs, we took a representative sample of 2,000 sentences (using random sample) and manually checked their meanings since it is not possible to automatically distinguish verb meaning and the valency patterns. Since most of MoS are not frequent in the corpus (e.g., *ćurlikati* has 11 examples), we manually checked both their meanings and the valency patterns by reading all examples. For more frequent verbs, apart from manually checking, we used CQL queries to find better examples for particular valency patterns. It has to be emphasized that some other valency patterns could be possible, but we relied on corpus data, so they are not included in the research.

Apart from the native speaker's intuition of both authors and the corpus check, other methods of testing the linguistic data have not been employed. Comparison with other languages is based on findings in the literature.

4 Analysis of MoS in Croatian

In our research, unlike Tuđman Vuković (2010), we included verbs that do not primarily belong to the class of MoS if their use as MoS is attested in the corpus. This decision is justified by the assumption that all verbs within the same semantic subclass share the same valency patterns, regardless of the semantic class their first meaning belongs. Subclasses are categorized based on the meaning component that is emphasized (volume, clarity of pronunciation, content, emotions), rather than being named after the representative of the group. Verbs with an emotional component are separated into a special subclass, even though they share some other components with other classes and could be put into more than one subclass. For example, the verb *grmjeti* 'thunder' could be classified as a verb of loud speaking and a verb with an emotional component. In this article, verbs are divided into four classes.

1. Verbs with an emphasis on volume are divided into two subclasses:
 - a. Verbs of loud speaking denote speaking with a loud volume due to environmental factors or the speaker's psychosomatic state.
 - b. Verbs of quiet speaking denote speaking with a quiet voice. They are usually associated with something positive, with intimacy between participants, but can also indicate an attempt to conceal something confidential or unpleasant.
2. Verbs of incomprehensible speaking denote changes in the pronunciation of words and sentences, which results in incomprehensibility.
3. Verbs of meaningless speaking and complaining are divided into two subclasses:
 - a. Verbs of meaningless speaking express that the speaker is uttering nonsense or boring objections.
 - b. Verbs of complaining denote that the speaker is expressing excessive complaints.
By using verbs from this group, one evaluates the message or speaker as boring, stupid, nonsense, etc.
4. Verbs with an emotional component emphasize the psychophysical state of the speaker, who feels anger, pain, or sadness, and less often happiness.

4.1 Verbs with emphasis on volume

Verbs with emphasis on volume, as already stated in Section 4, are divided into a subclass of verbs of loud speaking and a subclass of verbs of quiet speaking. The following subsections will describe their semantic and syntactic properties and conclude whether a semantic component such as volume affects the valency pattern of verbs.

4.1.1 Verbs of loud speaking

With the verbs *vikati*_{IPFV}/*viknuti*_{PFV} ‘yell, shout’, *kričati*_{IPFV}/*kriknuti*_{PFV} ‘scream’, *drečati*_{IPFV}/*dreknuti*_{PFV} ‘yell’, *derati se*_{IPFV} ‘bawl’, *urlati*_{IPFV} ‘waul, shout’, *urlikati*_{IPFV} ‘roar’, *vrištati*_{IPFV} ‘scream’, *galamiti*_{IPFV} ‘clamour’, *uzvikivati*_{IPFV}/*uzviknuti*_{PFV} ‘exclaim,’ and *dovikivati*_{IPFV}/*doviknuti*_{PFV} ‘shout’, there is an increased volume, caused either by environmental reasons or, most often, by negative emotions, which is also evident in the adverbs that occur with these verbs (*histerično* ‘hysterically’, *bijesno* ‘angrily’, *ljuto* ‘angrily’, *nekontrolirano* ‘uncontrollably’), and less often by positive emotions (*entuzijastično* ‘enthusiastic’, *veselo* ‘cheerfully’).⁹

The theme can be expressed by the clausal complement (12), the quotation (13), the accusative complement (14), and the prepositional complement *o* ‘about’ + locative (15). These verbs share the possibility of taking a clausal complement with other verbs of speaking, as has been described in Section 2.1. In Croatian, there is no complementizer drop with any syntactic or semantic class of verbs, and thus not with the MoS (12).

(12)

(...) *vičem ljudima *(da) smo napadnuti.*
 shout people.DAT.PL that are attacked
 ‘(...) I am shouting to the people *(that) we are under attack.’

(13)

-Maknite svjedoka od mene - vikao je Šale pravosudnim
 move witness from me shouted AUX Šale judicial.DAT.PL
policajcima.
 police-officers.DAT.PL
 ‘“Get the witness away from me,” Šale shouted to the judicial police officers.’

The nouns marked with the accusative case denote various narrative-related expressions, such as words, insults, and simplicity (14), while the prepositional phrase *o* ‘about’ + locative usually denotes a topic of conversation (15), same as with verbs of speaking presented in Section 2.1.

(14)

Cijelo to vrijeme su mu uzvikivali pogrđne riječi (...)
 all this time AUX him.DAT.SG shouted abusive.ACC.PL words.ACC.PL
 ‘All the time, they shouted abusive words to him (...)’

(15)

(...) *odjednom počne vikati putnicima o religiji (...)*
 suddenly starts shout passenger.DAT.PL about religion.LOC.SG
 ‘(...) (a pilot who, as if in a comedy,) suddenly starts shouting to the passengers about religion (...)’

With these verbs, there is another way of expressing the theme. The theme can be expressed by the prepositional phrase *za* ‘for’ + accusative (16), which emphasizes the desire or effort to get or achieve something, and the prepositional phrase *protiv* ‘against’ + genitive (17) or the prepositional phrase *na* ‘at’ + accusative (18), which both emphasize opposition to whom or what.

⁹ The verbs *vrištati*_{IPFV}/*vrisnuti*_{PFV} ‘scream’ and *kričati*_{IPFV} ‘scream’ emphasize the emotional component and often do not imply the transfer of a message, but a spontaneous, non-verbal reaction to an emotional or physical stimulus, and in that case, they are monovalent and not the subject of our research. The verbs *drečati*_{IPFV}/*dreknuti*_{PFV} ‘shout’ and *urlati*_{IPFV} ‘waul, shout’ and *urlikati*_{IPFV} ‘roar’ denote speaking with higher volume and intensity than the verbs *vikati*_{IPFV}/*viknuti*_{PFV} ‘shout’, which are prototypical and at the same time the most frequent verbs of this class. The verbs *uzvikivati*_{IPFV}/*uzviknuti*_{PFV} ‘exclaim’ denote a short duration of the sound. The verbs *dovikivati*_{IPFV}/*doviknuti*_{PFV} ‘shout’, in addition to short duration, express that the focus is on the recipient.

(16)

(...) *mnoštvo i više za potpisivanje mira.*
 crowd and shouts for signing.ACC.SG peace.GEN.SG

‘(In the morning, a crowd gathered at St. Mark’s Square) and called for the peace treaty.’

(17)

(...) *protiv GMO-a viču oni u razvijenim zemljama (...)*
 against GMO.GEN shout they in developed countries

‘(...) those in developed countries are protesting against GMO (...)’

(18)

(...) *viču na loš sustav Za odvodnju.*
 shout on bad.ACC.SG system.ACC.SG for drainage.ACC.SG

‘(...) they are complaining about a bad drainage system.’

The recipient can be expressed by the dative (12, 13, 14, 15) when a message is sent to them, but also by a prepositional phrase *na* ‘at’ + accusative, when negative emotions or activities are directed at the recipient (19). This prepositional phrase implies that the person doing the yelling is directing their words in a hostile or angry manner at the person being spoken to. The occurrence of the prepositional phrase *na* ‘at’ + accusative is characteristic for this group, i.e., it does not occur with the prototypical verbs of speaking, as has been stated in Section 2.1. The recipient can also be marked with a prepositional phrase *za* ‘after’ + instrumental (20), and these are events in which the speaker does not address the recipient to the face, but to the ‘back’.

(19)

Ustala je i dreknula na mene: Što vi mislite, gospodine?
 stood-up AUX and yelled on me.ACC what you think sir

‘She stood up and yelled at me, “What do you think, sir?”’

(20)

Koliko puta ste čuli svoju majku kako urla za vama:
 how-many times AUX heard your mother how yells after you.ins.pl

‘*Osušiti kosu, prehladit ćeš se?*’

dry hair catch-a-cold will REFL

‘How many times have you heard your mother yell after you, “Dry your hair, you’ll catch a cold?”’

Along with these verbs, the prepositional phrase *u* ‘into’ + accusative appears with certain nouns (e.g., *u uho* ‘into the ear’, *u slušalicu* ‘into the telephone receiver’, *u mikrofon* ‘into the microphone’) and indicates the goal, i.e., the final location of the sound that travels through the air from the speaker to the factive/fictive container (cf. Vergaro et al. 2014, 416). In this regard, the association of verbs of speaking with the verbs of moving has been discussed in the literature (cf. Mastrofini 2013, Vergaro et al. 2014), starting from Talmy’s description of the verbs of moving (Talmy 2000). The question is whether the phrase introduced with the preposition *u* ‘into’ is a complement or an adjunct in examples like (21). The prepositional phrase *u* ‘into’ + accusative in (21) indicates not only the goal, but also the manner because it affects the quality of the activity. Therefore, we define it as an adjunct.

(21)

Dino je vikao u mikrofon: Dragi gledaoci, izgleda da...
 Dino AUX shouted into microphone.ACC.SG dear viewers seems that

‘Dino shouted into the microphone: Dear viewers, it seems that (conflict and disorder is rising among the citizens).’

4.1.2 Verbs of quiet speaking

The verbs *šaptati*_{IPFV}/*šapnuti*_{PFV} ‘whisper’ and *šaputati*_{IPFV} ‘whisper in a slow manner’ differ semantically from the verbs of the previous class in that they express speaking with a decreased volume. In Section 2.2, it is stated that quiet voice signifies intimacy and friendship, so with these verbs, adverbs *tiho* ‘quietly’, *meko* ‘tenderly’, *nježno* ‘gently’, *prisno* ‘intimately’, *tajno* ‘secretly’, and *diskretno* ‘discreetly’ occur. However, these verbs can also bring a negative connotation and can indicate gossip, rumors, intrigue (23), or fear (24).

(22)

Grlite ju, mazite, šapćite joj prije spavanja da ste ovdje.
 Hug her cuddle whisper her.DAT.SG before sleeping that are here
 ‘Before bed, hug her, cuddle her, and whisper to her that you are here.’

(23)

Nitko to neće na glas reći, ali će se potiho šaptati da su sigurno raspuštenice, kurve (...)
 no-one it won’t outloud say but will REFL quietly whisper that are
 surely divorcees whores
 ‘No one will say it out loud, but they will quietly whisper that they must be divorcees, whores (...)’

(24)

S kolegama u dnu hodnika, (...) uplašeno se pogledavajući, šapućete o otkazima.
 with colleagues in bottom hallway fearfully REFL looking
 whisper about dismissals.LOC.PL
 ‘Standing with your colleagues at the bottom of the hallway, (...) you look at each other in fear, whispering about the dismissals.’

As for the valency patterns of these verbs, as with the verbs of the previous group, the theme can be expressed by the clausal complement (22–23), quotation (26), the accusative complement (25), the prepositional complement *o* ‘about’+ locative (24), and the prepositional complement *protiv* ‘against’ + genitive (27), but no prepositional complement *na* ‘at’ + accusative has been found in the corpus.¹⁰

(25)

(...) počni mi šaptati prostote (...)
 start me.DAT.SG whisper dirty-words.ACC.PL
 ‘(...) start whispering dirty words to me (...)’

(26)

Bego šapće ženi: Ludnica, sutra idem tamo.
 Bego whispers wife.DAT.SG crazy tomorrow go there
 ‘Bego whispers to the wife, “Awesome, I’m going there tomorrow.”’

¹⁰ There are a few examples in the corpus with the prepositional phrase *za* ‘for’ + accusative. The verb’s meaning with this preposition does not necessarily convey quiet speaking, more ‘giving a hint about something possibly discretely’ (ii). We thank the reviewer for this observation.

(ii)

Hvala Puli koja mi je “šapnula” za Raju.
 thank Pula that me.DAT.SG AUX whispered for Raja.ACC.SG
 ‘Thanks to Pula that “whispered” to me about Raja.’

(27)

(...) *šapću protiv svih oko nas (...)*
 whisper against everyone.GEN.PL around us

‘(...) they whisper about everyone around us (and force us into actions we are not even aware of).’

The verbs of this class differ from the verbs of the previous class in that the recipient is expressed only by the dative (22, 25, 26). The prepositional phrase *na* ‘at’ + accusative has not been confirmed in the corpus, while the prepositional phrase *za* ‘after’ + instrumental has been confirmed in one example (28). As already pointed out in Subsection 4.1.1, expressing the recipient with a prepositional phrase *za* ‘after’ + instrumental serves to indicate that the speaker is addressing the hearer from a position behind them. Given the increased distance between the speaker and the hearer, it becomes necessary for the speaker to employ a loud voice in order to effectively convey the message. Consequently, whispering in this context would not be an effective means of capturing the hearer’s attention and transmitting the intended message. However, it is possible to imagine a situation, such as (28), in which by whispering after someone, regret or sorrow is expressed, which is known from the context.

(28)

(...) *šapnu za njim: - Langeru ni riječi. -*
 whispered after him.INST.SG Langer.DAT.SG NEG word.GEN.SG

‘(...) she whispered after him: - Not a word to Langer. -’

Pesetsky (1995, 14) points out that in English the difference between loud speaking and quiet speaking is not grammatically relevant, but, as it has been shown, in Croatian, there is a difference in realization of complements, which means that the difference is grammaticalized.

4.2 Verbs of incomprehensible speaking

The verbs *muml(j)ati*_{IPFV} ‘mumble’, *frfljati*_{IPFV} ‘gibber’, and *mrmljati*_{IPFV} ‘mutter’ mean ‘speak incomprehensibly, so that it is difficult to understand’, and they appear in the corpus with the adverbs *nerazgovijetno* ‘incomprehensibly, inarticulately’, *nerazumno* ‘ununderstandably’. The theme is expressed by the clausal complement (29), quotation (30), the accusative complement (31), and the prepositional complement *o* ‘about’ + locative (32). With this class of verbs, the recipient is rarely expressed (32) because the emphasis is on the speaker and/or the message, while the recipient is unimportant, as stated in Section 2.2 (cf. Tuđman Vuković 2010, 153). The speaker is often perceived as a participant focused on oneself, which can also be seen by the fact that the construction *sebi u bradu* ‘oneself in the chin = to oneself’ often accompanies these verbs (29–30).¹¹

(29)

Kaže da je često sebi u bradu mrmljao da
 say that AUX often himself.DAT into chin.ACC.SG mutter that
će sve raznijeti.

will everything blow-up

‘He says he often used to mutter to himself that he would blow everything up.’

(30)

-Svašta- mrmlja Veljko sebi u bradu, blagi sjedokosi muškarac.
 anything mutters Veljko himself.DAT in chin.ACC.SG gentle gray-haired man

‘“Strange,” Veljko, a gentle gray-haired man, mutters to himself.’

¹¹ The construction *sebi u bradu* ‘oneself in the chin = to oneself’ is an adjunct that denotes a manner. It means ‘to say unclearly, indistinctly, and very quietly’.

(31)

(...) *i međusobno mumljaju iste priče.*

and mutually mumble same.ACC.PL stories.ACC.PL

‘(...) (they are constantly hanging out at the same bar) and mumbling the same stories to each other.’

(32)

(...) *mumljat ću im o ljubavi i trpljenju.*

mumble will them.DAT.PL about love.LOC.SG and suffering.LOC.SG

‘(...) I will mumble to them about love and suffering.’

The verbs *frfjati*_{IPFV} ‘gibber’, *mrmljati*_{IPFV} ‘mutter,’ and *brundati*_{IPFV} ‘mutter, growl’ occur with the prepositional phrase *protiv* ‘against’ + genitive (33), as well as the prepositional phrase *na* ‘at’ + accusative (34).

(33)

(...) *samo su frfjale protiv nekog.*

just AUX gibbered against someone.GEN

‘(...) they were just gibbering about someone.’

(34)

Mrmljaš li na Boga i ljude?

mutter Q on God.ACC.SG and people.ACC.PL

‘Do you mutter at God and people?’

The verbs *mucati*_{IPFV} and *zamuckivati*_{IPFV} ‘stutter’ mean ‘speak intermittently or speak repeating syllables’, resulting in slurred speech. Sometimes the cause of such speech is stated (e.g., *od bijesa* ‘with anger’, *od treme* ‘with stage fright’, *od uzbuđenja* ‘with excitement’, *od radosti* ‘with joy’), if it is not seen as a speech disorder. The recipient is almost never expressed because the emphasis is on the manner of pronunciation.¹² The theme, if it is expressed, can be expressed by the accusative complement (35), the prepositional complement *o* ‘about’ + locative (36), the clausal complement (37), and the quotation (38).

(35)

(...) *čovjek je došao sebi i počeo je mucati nešto.*

man AUX came himself and started AUX stutter something.ACC

‘(...) the man came to his senses and started stuttering about something.’

(36)

Sanader je mucao o tome (...)

Sanader AUX stuttered about that.LOC

‘Sanader stuttered about that (...)’

(37)

Nane muca u mikrofona HTV-a kako su ih

Nane stutters into microphone.ACC.SG. HTV how AUX them

gadali kamenjem.

threw stones

‘Nane is stuttering into HTV’s microphone that they threw stones at them.’

¹² The recipient with the verb *mucati* ‘stutter’ was attested in one example (iii).

(iii)

(...) *slušam tipa kako mi pola sata muca o hipotekarnoj krizi (...)*

listen guy how me.DAT.SG half hour stutters about mortgage.LOC.SG crisis.LOC.SG

‘(...) I’m listening to the guy stuttering to me about the mortgage crisis for half an hour (...)’

(38)

-Pa... da... da... jes...- *mucam od zbunjenosti (...)*
 Well yes yes yes stutter from confusion
 ‘- Well ... yes ..., yes ... yes ... - I am stuttering with confusion (...)’

4.3 Verbs of meaningless speaking and complaining

Verbs of meaningless speaking and complaining are divided into a subclass of verbs of meaningless speaking and a subclass of verbs of complaining, as stated in Section 4. Both subclasses involve a negative evaluation of the speaker and/or message, but in the second subclass, the dissatisfaction is directed toward the recipient, which impacts the valency patterns. That is the reason for their separation into two subclasses.

4.3.1 Verbs of meaningless speaking

The verbs of this class with their first meaning belong to the class of verbs of sound made by animals (*kokodakati*_{IPFV}/*kokodaknuti*_{PFV} ‘cluck, PFV’, *blejati*_{IPFV} ‘bleat’, *kreketati*_{IPFV} ‘croak’) and the class of verbs of sound emission (*klepetati*_{IPFV} ‘clatter’, *tresnuti*_{PFV} ‘slap = blabber’, *bubnuti*_{PFV} ‘slam = blabber’).¹³ But due to metaphorical extension (see Section 2.2), they can be used as MoS. These verbs usually indicate that someone is talking in vain, a lot, boring, or nonsense, while with the verbs *bubnuti*_{PFV} ‘slam = blabber’ and *tresnuti*_{PFV} ‘slap = blabber’ the emphasis is on the fact that something stupid is said without thinking, suddenly and unexpectedly. Choosing these verbs, a negative attitude toward the speaker is expressed, which is why it is often unnecessary to express what exactly the content is, while the recipient is completely irrelevant and, apart from a few attested exceptions (39), in most cases, it is not expressed. The theme can be expressed by the accusative complement (39), the prepositional complement of ‘about’ + locative (40), the clausal complement (41), and less often by the quotation (42).

(39)

Bubnuo sam naslov uredniku Jurišiću iz
 blabbered AUX headline.ACC.SG editor.DAT.SG Jurišić.DAT.SG from
vedra neba (...)
 clear sky
 ‘I blabbered the headline to editor Jurišić out of the blue (...)’

(40)

(...) bleje o zastavama dok jedva kruha imaju za jesti.
 bleat about flags.LOC.PL while barely bread have for eat
 ‘(...) they bleat about flags while they barely have bread to eat.’

(41)

(...) čija je voditeljica tresnula da više nitko ne BACA ruku
 whose AUX presenter blabbered that anymore no-one NEG throws hand
u vatru (...)
 into fire
 ‘(...) whose presenter cracked that no one THROWS a hand into the fire (...)’

¹³ In this group, the verb *jodlati*_{PFV} ‘yodel’ can be included, for which a confirmation for the theme with the preposition phrase of ‘about’ + locative was found in the corpus (iv).

(iv)

(...) nemoj mi tu jodlati o nekakvoj "sređenosti".
 don't me.DAT.SG here yodel about some.LOC.SG orderliness.LOC.SG
 ‘(...) don't yodel to me about some “orderliness”.’

(42)

“Dodjite s nama dernecit u subotu.”, kokodaknula sam.
 come with us party in Saturday clucked AUX
 “‘Come with us to the party on Saturday’, I cooed.’

4.3.2 Verbs of complaining

Verbs that denote complaining, annoying objections, or annoyance with superfluous questions, as well as verbs described in Section 4.3.1, with their first meaning mostly belong to the class of verbs of sound emission (*zvo(n)cati*_{IPFV} ‘ding, nag’, *zvrndati*_{IPFV} ‘buzz, jar’) and the class of verbs of sound made by animals (*brundati*_{IPFV} ‘growl’, *kreketati*_{IPFV} ‘croak’), but due to metaphorical extension can be used as MoS. Since these verbs mean complaining and objection, the recipient is often expressed with a dative complement (43, 44, 46). The theme is most often expressed by the clausal complement (43), it can be expressed by the quotation (44), the accusative complement (45),¹⁴ or the prepositional complement *o* ‘about’ + locative (46).

(43)

Onda mama zvoca tati da me gleda da se uvjeri (...)
 then mom nags daddy.DAT.SG that me watch that REFL convince
 ‘Then Mom nagged Dad to watch me and convince him that (...)’

(44)

Samo sjediš i ništa ne radiš - zvala mu je.
 just sit and nothing NEG do nagged him.DAT.SG AUX
 “‘You just sit around and do nothing,’ she nagged at him.’

(45)

Onda ćete vi kreketati nešto o tome kako se u Srbiji
 then will you croak something.ACC about that.LOC how REFL in Serbia
gaze nečija prava (...)
 trample-on someone’s rights

‘Then you will croak (something) about how someone’s rights are being trampled on in Serbia (...)’

(46)

Zato nam Ameri i brundaju o nezadovoljavanju
 because us.DAT.PL Americans also growl about non-compliance.LOC.PL
NATO standarda (...)
 NATO standards

‘That’s why the Americans are growling at us about not meeting the NATO standards (...)’

If the disapproval is oriented on the message, the theme can be expressed by a prepositional phrase *protiv* ‘against’ + genitive (47) and *na* ‘at’ + accusative (48).

(47)

Mnogi brundaju protiv takvog vremena (...)
 many growl against such.GEN.SG weather.GEN.SG
 ‘Many people growl about such weather (...)’

¹⁴ Regarding the examples such as (45), it can be analyzed that there are several complements of a verb with the role of the theme – the accusative and the prepositional phrase *o* ‘about’ + locative, and even the clausal complement. However, it can also be interpreted that the verb has one complement (besides the nominative complement, i.e., subject) – accusative complement – while the rest is a clausal postmodifier of the nominal in the accusative. In this article, the latter interpretation is adopted.

(48)

Jest malo brundao Sagadin na obranu, na skok (...)
 is little growled Sagadin on defense.ACC.SG on jump.ACC.SG
 ‘Sagadin growled a little about their defense and their jumps (...)’

4.4 Verbs with emphasis on an emotional component

When describing the activity using verbs of this class, the emphasis is placed on the psychophysical state of the speaker. With the verbs *uzdisati*_{IPFV}/*uzdahnuti*_{PFV} ‘sigh’, *dahnuti*_{PFV}/*dahtati*_{IPFV} ‘gasp’, *disati*_{IPFV} ‘breathe’, *soptati*_{IPFV} ‘chug’, the emphasis is on the flow of air that occurs when breathing and the cause is fatigue, excitement, or passion. As stated in Section 2.2, with these verbs, there is a metonymical extension from verbs of breathing to MoS. These verbs have the theme expressed as a quotation (49) or a clausal complement (50), and extremely rarely a prepositional complement *o* ‘about’ + locative (51).

(49)

“Previše pljuga premalo konde” dahtao je.
 too-many smokes too-little condition gasped AUX
 ‘“Too many smokes, too little condition,” he gasped.’

(50)

Sjedokosa starica počela je uzdisati da joj fali zraka (...)
 gray-haired old-woman began AUX sigh that her lack air
 ‘The gray-haired old woman sighed that she was short of breath (...)’

(51)

(...) ona siva teta (...) uzdiše o potrošnji, bilanci i ostvarenim noćenjima.
 that gray woman sighs about spending.LOC.SG balance-sheet.LOC.SG and realized.LOC.PL overnight-stays.LOC.PL
 ‘(...) that gray-haired woman (...) sighs about spending, balance sheet and realized overnight stays.’

With these verbs, the recipient is found in a few examples in the corpus and most often refers to God (52). The recipient can also be expressed with the prepositional complement *k* ‘to’ + dative (53), which puts the focus on the recipient who is far away and the message does not directly reach him.¹⁵

(52)

(...) svjedoči o tome kako se molio i uzdisao Bogu da mu se smiluje.
 testify about that.LOC how REFL prayed and sighed God.DAT.SG that him REFL has-mercy
 ‘(...) he testifies about how he prayed and sighed to God to have mercy on him.’

(53)

(...) često uzdišemo k Bogu kratkim molitvenim riječima (...)
 often sigh to God.DAT.SG short.INS.PL prayer.INS.PL words.INS.PL
 ‘(...) we often call upon God with short words of prayer (...)’

¹⁵ It has to be emphasized that examples (52–53) are rare in the corpus and that it could be understood that the prepositional phrases are complements of the verb *moliti se* ‘pray’ rather than the verb *uzdisati* ‘sigh’. However, we think that they are complements of the verb *uzdisati* ‘sigh’.

Pain or grief is expressed with the verbs *jaukati*_{IPFV}/*jauknuti*_{IPFV} ‘moan’, *jecati*_{IPFV} ‘sob’, *plakati*_{IPFV} ‘cry’, *stenjati*_{IPFV} ‘groan’, *naricati*_{IPFV} ‘bewail, lament’, *kukati*_{IPFV} ‘lament, whine’, and with the verbs *kmečati*_{IPFV} ‘squeal’ or *tuliti*_{IPFV} ‘howl’, which always have a negative connotation. In the corpus, the recipient in the dative is expressed with the verbs *jecati*_{IPFV} ‘sob’, *plakati*_{IPFV} ‘cry,’ and *jaukati*_{IPFV}/*jauknuti*_{IPFV} ‘moan’ (54), while with other verbs it occurs seldom or does not occur at all. The theme is expressed as a quotation (54) or a clausal complement (55), while with the verbs *jaukati*_{IPFV} ‘moan’, *naricati*_{IPFV} ‘bewail, lament’, *plakati*_{IPFV} ‘cry’, *kukati*_{IPFV} ‘lament, complain’, *kmečati*_{IPFV} ‘squeal’, *tuliti*_{IPFV} ‘howl’, and *zavijati*_{IPFV} ‘howl’, the prepositional complement *o* ‘about’ + locative was found (56). The accusative complement was found with the verbs *tuliti*_{IPFV} ‘howl’ and *stenjati*_{IPFV} ‘groan’ (57), and the prepositional complement *protiv* ‘against’ + genitive with the verbs *kukati*_{IPFV} ‘lament, whine’, *tuliti*_{IPFV} ‘howl,’ and *zavijati*_{IPFV} ‘howl’ (58).

(54)

Hoću li ikada okusiti te neobične, šarene, fine francuske kolačiće -
will Q ever taste those unusual colorful fine French cookies
jaukala sam prijateljici.
moaned AUX friend.DAT.SG

‘“Will I ever taste those unusual, colorful, fine French cookies,” I moaned to a friend.’

(55)

Došla mi je na vrata, slomljena, JECAJUĆI da njezin život više
came me AUX on door broken SOBBING that her life anymore
nema smisla (...)
hasn’t meaning

‘She came to my door, broken and sobbing that her life no longer has meaning (...)’

(56)

Kad ga se opomene, onda nariče o patriotizmu.
when him REFL warned then laments about patriotism.LOC.SG
‘When he is warned, then he laments about patriotism.’

(57)

Provodit ćemo dane beživotno zavaljeni u fotelju i stenjati nešto
spend will days lifelessly reclined in armchair and moan something.ACC
o teškom životu bogatih i slavni.
about hard.LOC.SG life.LOC.SG rich.GEN.PL and famous.GEN.PL
‘We will spend days lifelessly reclining in an armchair, moaning about the hard life of the rich and famous.’

(58)

I gdje je onaj strip u kojem ženska zavija protiv svega (...)
and where is that comic in which woman howls against everything.GEN
‘And where is that comic in which a woman howls at everything (...)’

Certain verbs (e.g., *naricati*_{IPFV} ‘bewail, lament’, *uzdisati*_{IPFV} ‘sigh’, *plakati*_{IPFV} ‘cry’, *kukati*_{IPFV} ‘lament, whine’) can occur with the theme expressed by the prepositional phrase *za* ‘for’ + instrumental (59), which indicates the cause or goal of emotion and it is about a participant who is no longer present. The prepositional phrase *nad* ‘over’ + instrumental also can be used in these sentences (60). These prepositional complements do not come as a surprise since most of these verbs with their first meaning belong to the class of psych-verbs, which have that valency pattern (e.g., *žaliti*_{IPFV} ‘mourn’, *patiti*_{IPFV} ‘suffer’, *čeznuti*_{IPFV} ‘long’, *tugovati*_{IPFV} ‘grieve’; about valency patterns of psych-verbs in Croatian, see Belaj and Tanacković Faletar 2011, Birtić et al. 2018).

(59)

Otkrit ćete zašto Miha stalno nariče za dobrim starim
 discover will why Miha constantly cries for good.INS.PL old.INST.PL
 vremenima.
 times.INS.PL

‘You will discover why Miha constantly cries for the good old days.’

(60)

Pa je tako poseban užitak slušati i čitati ovakve kritike autora koji
 then is such unique pleasure listen and read such critics authors who
 nariču nad padom osobne potrošnje (...)
 lament over decline personal consumption

‘So it is such a unique pleasure to listen to and to read such criticism of authors who usually cry over the decline of personal consumption (...)’

The emotional component is expressed with the lemmata whose first meaning belongs to the class of verbs of sound made by animals (see Brač and Matijević 2021). When verbs of sound made by animals have a human in the subject position, they are used as MoS and they describe both the attitude toward the speaker’s voice and the speaker’s attitude to the recipient of the message (cf. Levin et al. 1997, 37). With these verbs, negative emotions are most often expressed, i.e., anger or rage (e.g., *frktati*_{IPFV} ‘hiss’, *graktati*_{IPFV}/*graknuti*_{PFV} ‘caw’, *kr(ij)eštati*_{IPFV} ‘screech’, *režati*_{IPFV} ‘growl’, *štekati*_{IPFV} ‘crackle’, *roktati*_{IPFV} ‘snort, grunt’, *siktati*_{IPFV}/*siknuti*_{PFV}/*prosiktati*_{PFV} ‘hiss’, *rikati*_{IPFV} ‘roar’) or some dissatisfaction (e.g., *cviliti*_{IPFV}/*cviljeti*_{IPFV} ‘whine’, *cijukati*_{IPFV} ‘squeak’). With these verbs, the volume component and the effect it has on the hearer are also expressed; so the verbs *graktati*_{IPFV}/*graknuti*_{PFV} ‘caw’, *kr(ij)eštati*_{IPFV} ‘screech’, *roktati*_{IPFV} ‘snort, grunt’, and *rikati*_{IPFV} ‘roar’ express an increased volume and an unpleasant voice. The verbs *siktati*_{IPFV}/*prosiktati*_{PFV} ‘hiss’ express a reduced volume, while the verbs *cviliti*_{IPFV}/*cviljeti*_{IPFV} ‘whine’ and *cijukati*_{IPFV} ‘squeak’ denote a muffled and/or squeaky voice. Although the volume component is present, we have classified these verbs in this group because we believe that the emotional component is more prominent.

With the verbs that emphasize anger, the participant to whom the anger is directed, i.e., the recipient, is often expressed with the prepositional phrase *na* ‘at’ + accusative (61, 64), as well as with verbs of loud speaking, as described in Section 4.1.1. The theme can be expressed by the prepositional phrase *protiv* ‘against’ + genitive (62), and by the clausal complement (63), quotation (64), and the prepositional phrase *o* ‘about’ + locative (65).

(61)

Joj kad se sjetim kak ste režali za Šukija,¹⁶ a
 oh when REFL remember how AUX growled for Šuki.ACC.SG and
 sad režite na njega.
 now growl on him.ACC.SG

‘Oh when I remember how you growled for Šuki, and now you growl at him.’

(62)

Da nije tako već bi graktali protiv njega.
 if isn’t so yet would cawed against him.GEN.SG

‘If it weren’t so, they would have been cawing against him...’

¹⁶ In (61), according to our valency theory, *za Šukija* ‘for Šuki’ would be defined as a prepositional complement with the role of the theme, expressing desire or effort to achieve something in Šuki’s favor in aggressive manner. However, we decided not to single out this complement with the verb *režati* ‘growl’ since it is attested in the corpus only in that example.

(63)

(...) *na što sam prosiktala da nisam (...)*
 on what AUX hissed that am_not

‘(She asked me later if I am satisfied,) and at that, I hissed that I am not (...)’

(64)

Frktao sam na nju: “Mama, gledaj Ti svoja posla (...)”
 snorted AUX on her.ACC.SG mom watch You own businesses

‘I hissed at her, “Mom, mind your own business (...)”’

(65)

(...) *onda će se dići sve tzv. nevladine udruge i*
 then will REFL rise all so-called non-governmental organizations and
graktati o nelegalnim smjenama.
 caw about illegal.LOC.PL dismissals.LOC.PL

‘(...) then all the so-called non-governmental organizations are going to rise and caw about illegal dismissals.’

There are fewer verbs that express the speaker’s happiness and voice that sound pleasant, e.g., *cvrkutati*_{IPFV} ‘tweet, chirp’, *žvrgoljiti*_{IPFV} ‘chirp’, *gugutati*_{IPFV} ‘coo’, *gukati*_{IPFV} ‘coo’.^{17,18} With these verbs, the recipient is expressed by the dative (66–67), and the theme most often by the clausal complement (66), the quotation (67), and the prepositional complement *o* ‘about’ + locative (68).

(66)

(...) *i gugutala svom unuku kako je isti mama.*
 and cooed her.DAT.SG grandson.DAT.SG how is same mom

‘(...) and (she) cooed to her grandson that he was the same as his mom.’

(67)

Nuša je gukala Matanu: “Što ti treba, sunce moje?”
 Nuša AUX cooed Matan.DAT.SG what you need sun my

‘Nuša cooed to Matan, “What do you need, my dear?”’

(68)

Ana je cvrkutala o noći, o muzici (...)
 Ana AUX chirped about night.LOC.SG about music.LOC.SG

‘Ana chirped about the night, about the music (...)’

With the verbs *cičati*_{IPFV}/*ciknuti*_{IPFV} ‘squeak’, *cijukati*_{IPFV} ‘squeak’ the emphasis is on a thin, squeaky voice, and they are used to express different emotions, more precisely excitement or surprise (69), joyfulness (70), but also pain, sadness, or dissatisfaction (71). The theme can be expressed by the quotation (69), the prepositional phrase *o* ‘about’ + locative (70), and the clausal complement (71).

(69)

Tanja šokirano cikne: - Pa kako?
 Tanja shocked squeaks well how

‘Tanja squeaked in shock: – How?’

¹⁷ The verbs *gugutati*_{IPFV} and *gukati*_{IPFV} ‘coo’ also denote the expression of an infant who does not yet speak. The use of those verbs with this meaning has not been analyzed in this article.

¹⁸ It can be noticed that verbs expressing the voice of a crow or a raven that are unpleasantly voiced, then a dog or a lion whose rage frightens us, etc. are used to express anger, and in the case of kind speaking there is a metaphorical transfer from the voice of a sparrow or pigeon to a human (see Rakhilina 2010).

(70)

Ljubi me u obraz i počnje cičati o svemu (...)
 kisses me in cheek and starts squeak about everything
 ‘She kisses me on the cheek and starts squeaking about everything (...)’

(71)

(...) cičati da se održi tvornica koja nema budućnost.
 squeak that REFL keep factory that hasn’t future
 ‘(...) they will whine to keep a factory that has no future.’

5 Results and discussion

Due to the additional semantic component that MoS have, the emphasis is often only on the activity, i.e., on the manner of conveying the message, so the verb can be realized only with one complement, i.e., a subject who is always a human. This characteristic distinguishes them from the verbs of speaking, which allow, for example, a text, news, or something similar to appear in the subject position (cf. Tuđman Vuković 2010) as a result of the metaphorical extension. Although these verbs are often monovalent, which also distinguishes them from the prototypical verbs of speaking, they can be realized in different valency patterns and express the participants in different morphological ways. An overview and comparison of valency patterns of all subclasses of MoS, as well as a comparison with prototypical verbs of speaking follows in Sections 5.1 and 5.2.

5.1 Differences and similarities in valency patterns of MoS

As previously noted, the theme and the recipient can be expressed in different morphological ways. The theme can be realized as a clausal complement, quotation, accusative complement, and prepositional complements. We assume that the quotation and clausal complement may appear with all analyzed verbs, even though for some of them one of those two complements has not been attested in the corpus due to the verbs’ low frequency. By choosing quotations and clauses as verb complements, the emphasis is on the characterization of the speaker, the volume or comprehensibility of one’s speech, the emotions one expresses during the speech, or the impression one leaves on the hearer. It is important to stress that in the Croatian language the complementizer *da* ‘that’ cannot be dropped with any class of verbs, and thus not with a class of MoS.

Often the theme is expressed by the prepositional phrase *o* ‘about’ + locative, and less often by the accusative complement, which usually denotes a narrative-related expression (e.g. *riječ* ‘word’, *prostota* ‘curse’, *priča* ‘story’, *legenda* ‘legend’).

The theme can be expressed by the prepositional phrase *protiv* ‘against’ + genitive or *na* ‘at’ + accusative, which emphasize opposition to whom or what. Conformation for these prepositions with the verbs within the class of meaningless speaking has not been found in the corpus. The prepositional phrase *na* ‘at’ + accusative has not been attested in the corpus for the verbs of quiet speaking and the verbs with an emotional component.

Semantically opposite to the prepositional phrase *protiv* ‘against’ + genitive is a prepositional phrase *za* ‘for’ + accusative, which denotes the participant in whose favor someone wants to achieve something. It is conformed with the verbs of loud speaking.

With some verbs within the class of verbs with an emotional component, the prepositional phrases *za* ‘for’ + instrumental and *nad* ‘over’ + instrumental can be used to express the theme, a valency pattern overtaken from psych-verbs. These prepositional phrases denote a participant who is no longer present which causes sadness.

The recipient can be expressed by a dative complement, by which it is only emphasized that a message has been sent to them, but it does not necessarily mean that one suffers the speaker’s anger or the like. The recipient in the dative is commonly used with the verbs of loud and quiet speaking, with the verbs of complaining, and with the verbs with an emotional component. However, it is not confirmed in the corpus

for some verbs, as they occur with the recipient rarely or not at all, such as verbs of incomprehensible speaking and the verbs of meaningless speaking. With these verbs, the recipient is not important since the speaker is focused on themselves and/or the message. This does not mean that the recipient cannot occur with these verbs, but it is not confirmed due to the poor representation of these verbs in the corpus.

With the verbs of loud speaking and those with an emphasis on a negative emotional component, the recipient can be expressed by the prepositional phrase *na* 'at' + accusative, which emphasizes that the negative emotions are directed at them and the speaker is in a superior position in relation to the recipient. Additionally, with the verbs of loud and (extremely rarely) quiet speaking, the recipient can also be expressed by the prepositional phrase *za* 'after' + instrumental, emphasizing that the speaker is behind the hearer and their voice follows them.

Interestingly, the prepositional phrase *za* + instrumental can have the role of both recipient and theme, of course, not in the same sentence. When it comes to the recipient, *za* 'after' + instrumental expresses the participant who is moving away, and when it comes to the theme, *za* 'for' + instrumental expresses the participant who is no longer there, i.e., both complements share the semantic characteristic of moving away, i.e., disappearing. An overview of attested complements expressing the theme and recipient is provided in Table 1.

MoS share with the prototypical verbs of speaking (presented in Section 2.1) the possibility to express the theme with a clausal complement, a quotation, an accusative complement, a prepositional complement *o* 'about' + locative, and some of them a prepositional complement *protiv* 'against' + genitive. The main difference between MoS and verbs of speaking is the use of the prepositional phrase *za* 'for, about' + accusative. Namely, with verbs of speaking, this phrase is used to denote the topic of conversation, as well as the prepositional phrase *o* 'about' + locative. However, with MoS, the component of desire or effort to achieve something in someone's favor is included. When it comes to the use of the accusative complement and the prepositional complement *o* 'about' + locative with MoS, the contextualization of the topic is not necessary, similar to the verb *govoriti* 'speak' and different from the verbs *reći* and *kazati* 'say, tell'. Regarding the recipient, the prepositional phrase *na* 'at' + accusative is not confirmed in the corpus with analyzed verbs of speaking which indicates that the usage of recipient phrase *na* 'at' + accusative is a unique trait of the MoS.

In summary, while prototypical verbs of speaking and MoS share some valency patterns, the presence of additional semantic component(s) results in differences in valency patterns, thus separation of MoS in a distinct class is justified.

5.2 Possibility of combining different complements

Apart from the fact that with MoS both the theme and the recipient can be expressed by different complements, it is also interesting that certain combinations of complements have not been attested in the corpus.

With the recipient in the dative, the theme can be expressed by various complements such as the accusative, the prepositional phrase *o* 'about' + locative, the clausal complement, and the quotation. However, with the recipient expressed by the prepositional complement *na* 'at' + accusative or *za* 'after' + instrumental, only the theme expressed by the clausal complement or quotation has been attested. The possibility of different complements with the recipient in the dative can be explained by the similarity to the valency pattern of prototypical verbs of speaking and the fact that the emphasis is on both the message and the recipient. On the other hand, when the recipient is expressed by the prepositional phrase *na* 'at' + accusative, the emphasis is primarily on the recipient and the theme is expressed by the quotation and clausal complement. It is noteworthy that when the theme is expressed by the prepositional phrase *protiv* 'against' + genitive, *na* 'at' + accusative, and *za* 'for' + accusative, corpus data indicate that it might not be possible to express the recipient. This can be attributed to the strong emphasis on the content, i.e., on the message in these cases.

Interestingly, the verbs that select for the prepositional phrase *protiv* 'against' + genitive to express the theme also select for the prepositional phrase *na* 'at' + accusative to express the recipient. This confirms that

Table 1: Realization of the theme and the recipient with MoS

MoS subclass Complement	1a. Verbs of loud speaking	1b. Verbs of quiet speaking	2. Verbs of incomprehensible speaking	3a. Verbs of meaningless speaking	3. b. Verbs of complaining	4. Verbs with an emotional component
Theme						
clause	+	+	+	+	+	+
quotation	+	+	+	+	+	+
accusative	+	+	+	+	+	+
<i>o</i> 'about' + locative	+	+	+	+	+	+
<i>protiv</i> 'against' + genitive	+	+	+	NA	+	+
<i>na</i> 'at' + accusative	+	NA	+	NA	+	NA
<i>za</i> 'for' + accusative	+	NA	NA	NA	NA	NA
<i>za</i> 'for' + instrumental <i>nad</i>	NA	NA	NA	NA	NA	+
'over' + instrumental						
Recipient						
dative	+	+	Rare		+	+
<i>na</i> 'at' + accusative	+	NA	NA	NA	NA	+
<i>za</i> 'after' + instrumental	+	Rare	NA	NA	NA	NA

Table 2: The possibilities of combining recipient and theme

Recipient	Theme
dative	accusative <i>o</i> 'about' + locative clausal complement quotation
<i>na</i> 'at' + accusative	clausal complement quotation
<i>za</i> 'after' + instrumental	clausal complement quotation
NA	<i>protiv</i> 'against' + genitive
NA	<i>za</i> 'for' + accusative
NA	<i>za</i> 'for' + instrumental

these verbs express negative emotions that are sometimes directed toward the recipient and sometimes toward the theme. However, these two phrases, *protiv* 'against' + genitive and *na* 'at' + accusative, have not been found in the corpus in the same sentence, despite the fact that they express different semantic roles, which would be theoretically possible. This is likely due to the fact that both phrases place emphasis on a particular participant (theme or recipient), making it difficult to emphasize both in a single sentence.

The possibilities of combining recipients and themes expressed by different phrases are shown in Table 2.

6 Conclusion

This article presents the first thorough analysis of valency patterns of MoS in Croatian. The research is based on a corpus analysis of 122 verbs with MoS meaning. Croatian web corpus was used to identify whether a verb is used as MoS and, if so, to determine its valency pattern(s).

Although verbs of speaking are not the main topic of this article, some new insights into the realization of their complements have been provided. Additionally, a comparison of verbs of speaking and MoS resulted in the answers to the first and second research questions. It is shown that the semantic component of manner is reflected in syntactic structure (RQ1), which motivated us to include verbs from other semantic classes into the class of MoS.

For example, addressing the recipient in a loud voice or in an angry manner results in expressing the recipient with the prepositional complement *na* 'at' + accusative, which is not used with prototypical verbs of speaking. Also, different prepositional complements are used to express the theme. For example, with some verbs with an emotional component, the theme can be expressed with prepositional phrases *za* 'for' + instrumental and *nad* 'over' + instrumental to denote the participant who is no longer here and the speaker feels sadness. In summary, while verbs of speaking and MoS share some valency patterns, the presence of additional semantic component(s) results in differences in valency patterns, thus separation of MoS in a distinct class is justified (RQ2).

The MoS were divided into four subclasses based on the semantic component that is emphasized (volume, comprehensibility, content, emotions). Within each class, common valency patterns were identified, as well as differences between different subclasses. Based on that, the analysis reveals that verbs with similar meanings share the same valency patterns.

To some extent, it is answered to the RQ3, i.e., whether MoS that are transferred from other semantic classes match valency patterns of prototypical verbs of speaking or with their original semantic class. It seems that the answer can be positive to both assumptions. Although the MoS adopt the valency patterns of the verbs of speaking in general, it has been noted that some verbs have valency pattern from their, supposedly, original semantic class (e.g., the verb *plakati* 'cry' can have a theme complement expressed with the prepositional

phrases *nad* ‘over’ + instrumental or *za* ‘for’ + instrumental, which are characteristic complements of psych-verbs). However, for a more comprehensive description of MoS and an answer to RQ3, further research is needed. It is necessary to examine valency patterns of other semantic classes, as well as an analysis of the process of metonymical and metaphorical extensions, i.e., polysemy to determine the extent to which a verb’s valency patterns are influenced by the verb class to which its first meaning belongs. Additionally, future work should involve a more extensive corpus analysis of verbs of speaking to gain a deeper understanding of the topic.

Despite the limitations of this article, the valency description of MoS presented in this research has the potential to contribute to the inclusion of Croatian in comparative studies, thereby leading to a more comprehensive understanding of this class of verbs.

Abbreviations

ACC	accusative
AUX	auxiliary
DAT	dative
GEN	genitive
INS	instrumental
IPFV	imperfective
HJP	<i>Hrvatski jezični portal</i>
LOC	locative
MP	Mikelić Preradović (2020)
NA	not attested
NEG	negation
OS	other sources
PFV	perfective
PL	plural
REFL	reflexive
SG	singular
ŠK	<i>Školski rječnik</i> (Birtić et al. 2012)
Q	question particle

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Appendix

Table A1: List of analyzed verbs

Verb subclass	Verb	Source	
1. Verbs with an emphasis on volume	<i>derati</i> _{se} _{IPFV} ‘bawl’	MP	
	<i>dovikivati</i> _{IPFV} ‘shout’	MP	
	<i>doviknuti</i> _{IPFV} ‘shout’	HJP	
	<i>drečati</i> _{IPFV} ‘yell’	MP	
	<i>dreknuti</i> _{IPFV} ‘yell’	OS	
	<i>galamiti</i> _{IPFV} ‘clamour’	HJP	
	<i>izvikivati</i> _{IPFV} ‘shout out’	ŠK	
	<i>kričati</i> _{IPFV} ‘scream’	MP	
	<i>kriknuti</i> _{PFV} ‘scream, shout out’	OS	
	<i>šapnuti</i> _{PFV} ‘whisper’	ŠK	
	<i>šaptati</i> _{IPFV} ‘whisper’	MP	
	<i>šaptati</i> _{IPFV} ‘whisper’	MP	
	<i>urlati</i> _{IPFV} ‘waul, shout’	MP	
	<i>urlikati</i> _{IPFV} ‘roar’	MP	
	<i>uzvikivati</i> _{IPFV} ‘exclaim’	MP	
	<i>vikati</i> _{IPFV} ‘yell, shout’	ŠK	
	<i>viknuti</i> _{PFV} ‘yell, shout’	ŠK	
	<i>vrisnuti</i> _{IPFV} ‘scream’	ŠK	
	<i>vrištati</i> _{IPFV} ‘scream’	MP	
	<i>zaurlati</i> _{PFV} ‘howl’	OS	
	<i>zavrištati</i> _{PFV} ‘scream, start to scream’	OS	
	2. Verbs of incomprehensible speaking	<i>bruhati</i> _{IPFV} ‘mutter, growl’	MP
		<i>frfjati</i> _{IPFV} ‘gibber’	HJP
		<i>gundati</i> _{IPFV} ‘grumble, mumble’	ŠK
		<i>mrmljati</i> _{IPFV} ‘mutter’	HJP
		<i>mucati</i> _{IPFV} ‘stutter’	MP
		<i>muml(j)ati</i> _{IPFV} ‘mumble’	MP
<i>progundati</i> _{PFV} ‘grumble, mumble’		HJP	
<i>promrmljati</i> _{PFV} ‘mutter’		HJP	
<i>promucati</i> _{PFV} ‘stutter’		HJP	
<i>zamuckivati</i> _{IPFV} ‘stutter’		MP	
3. Verbs of meaningless speaking and complaining		<i>(p)sikati</i> _{IPFV} ‘hiss’	MP
		<i>blejati</i> _{IPFV} ‘bleat’	MP
	<i>brbotati</i> _{IPFV} ‘babble’	OS	
	<i>brundati</i> _{IPFV} ‘growl, mutter’	HJP	
	<i>bubnuti</i> _{PFV} ‘slam = blabber’	HJP	
	<i>buncati</i> _{IPFV} ‘rave’	HJP	
	<i>čurlikati</i> _{IPFV} ‘warble’	MP	
	<i>jodlati</i> _{IPFV} ‘yodel’	MP	
	<i>kenjati</i> _{IPFV} ‘shit’	HJP	
	<i>klepetati</i> _{IPFV} ‘clatter’	HJP	
	<i>kokodakati</i> _{IPFV} ‘cluck’	MP	
	<i>kokodaknuti</i> _{PFV} ‘cluck’	HJP	
	<i>kreketati</i> _{IPFV} ‘croak’	MP	
	<i>kukurikati</i> _{IPFV} ‘crow’	MP	
	<i>kukuriknuti</i> _{PFV} ‘crow’	OS	
<i>kvakati</i> _{IPFV} ‘quak’	OS		
<i>kvocati</i> _{IPFV} ‘ding, nag’	MP		
<i>meketati</i> _{IPFV} ‘bleat’	MP		
<i>njakati</i> _{IPFV} ‘bray’	MP		
<i>revati</i> _{IPFV} ‘bray, heehaw’	MP		

(Continued)

Table A1: Continued

Verb subclass	Verb	Source
	<i>rzati</i> _{IPFV} 'neigh'	OS
	<i>srati</i> _{IPFV} 'shit'	HJP
	<i>tepati</i> _{IPFV} 'coo'	MP
	<i>tresnuti</i> _{PFV} 'slap = blabber'	HJP
	<i>unjkati</i> _{IPFV} 'nasalize'	MP
	<i>zablejati</i> _{PFV} 'bleat'	OS
	<i>zvo(n)cati</i> _{IPFV} 'ding, nag'	HJP
	<i>zvrndati</i> _{IPFV} 'buzz, jar'	HJP
4. Verbs with an emotional component	<i>cičati</i> _{IPFV} 'squeak'	MP
	<i>cijukati</i> _{IPFV} 'squeak'	OS
	<i>ciknuti</i> _{PFV} 'squeak'	OS
	<i>cviliti/cviljeti</i> _{IPFV} 'whine'	MP
	<i>cvrkutati</i> _{IPFV} 'tweet, chirp'	MP
	<i>dahnuti</i> _{PFV} 'gasp'	ŠK
	<i>dahtati</i> _{IPFV} 'gasp'	MP
	<i>disati</i> _{IPFV} 'breathe'	OS
	<i>frknuti</i> _{PFV} 'hiss'	OS
	<i>frktati</i> _{IPFV} 'hiss'	MP
	<i>gakati</i> _{IPFV} 'quak'	MP
	<i>gaknuti</i> _{PFV} 'quak'	OS
	<i>graknuti</i> _{PFV} 'caw'	OS
	<i>graktati</i> _{IPFV} 'caw'	MP
	<i>grmjeti</i> _{IPFV} 'thunder'	MP
	<i>gugutati</i> _{IPFV} 'coo'	MP
	<i>gugutati</i> _{IPFV} 'coo'	MP
	<i>gukati</i> _{IPFV} 'coo'	MP
	<i>hihotati</i> _{IPFV} 'giggle'	MP
	<i>hukati</i> _{IPFV} 'roar'	MP
	<i>jaukati</i> _{IPFV} 'moan'	MP
	<i>jauknuti</i> _{PFV} 'moan'	OS
	<i>jecati</i> _{IPFV} 'sob'	MP
	<i>ječati</i> _{IPFV} 'sob, groan'	MP
	<i>klicati</i> _{IPFV} 'cheer, acclaim'	MP
	<i>kmečati</i> _{IPFV} 'squeal'	MP
	<i>kr(ij)eštati</i> _{IPFV} 'screech'	MP
	<i>kukati</i> _{IPFV} 'lament, whine'	HJP
	<i>mrmoriti</i> _{IPFV} 'gurgle'	OS
	<i>naricati</i> _{IPFV} 'bewail, lament'	OS
	<i>pištati</i> _{IPFV} 'whistle, shriek'	MP
	<i>pjevati</i> _{IPFV} 'sing'	MP
	<i>plakati</i> _{IPFV} 'cry'	HJP
	<i>praskati</i> _{IPFV} 'peal'	MP
	<i>presti</i> _{IPFV} 'purr'	MP
	<i>prosiktati</i> _{PFV} 'hiss'	HJP
	<i>prošištati</i> _{PFV} 'hiss, whoosh, fizzle'	OS
	<i>režati</i> _{IPFV} 'growl'	MP
	<i>rikati</i> _{IPFV} 'roar'	MP
	<i>roktati</i> _{IPFV} 'snort, grunt'	MP
	<i>sikati</i> _{IPFV} 'hiss'	OS
	<i>siknuti</i> _{PFV} 'hiss'	OS
	<i>siktati</i> _{IPFV} 'hiss'	MP
	<i>skričati</i> _{IPFV} 'squeal, scream'	OS
	<i>skvičati</i> _{IPFV} 'squeal, scream'	MP
	<i>soptati</i> _{IPFV} 'chug'	MP
	<i>stenjati</i> _{IPFV} 'groan'	OS

(Continued)

Table A1: Continued

Verb subclass	Verb	Source
	<i>šišťati</i> _{IPFV} ‘hiss, whoosh, fizzle’	MP
	<i>škripnuti</i> _{PFV} ‘creak’	OS
	<i>štekati</i> _{IPFV/IPFV} ‘crackle’	MP
	<i>tuliti</i> _{IPFV} ‘howl’	MP
	<i>uzdahnuti</i> _{PFV} ‘sigh’	OS
	<i>uzdisati</i> _{IPFV} ‘sigh’	OS
	<i>zajecati</i> _{PFV} ‘sob, start to sob’	OS
	<i>zamukati</i> _{PFV} ‘moo, start to moo’	OS
	<i>zapišťati</i> _{IPFV} ‘whistle, shriek’	OS
	<i>zapjevati</i> _{PFV} ‘sing, start to sing’	OS
	<i>zarežati</i> _{IPFV} ‘growl, start to growl’	OS
	<i>zaštektati</i> _{PFV} ‘crackle, start to crackle’	OS
	<i>zavijati</i> _{IPFV} ‘howl’	MP
	<i>žamoriti</i> _{IPFV} ‘ripple’	MP
	<i>živkati</i> _{IPFV} ‘chirp’	OS
	<i>žvrgoljiti</i> _{IPFV} ‘chirp’	OS
NA	<i>bučati</i> _{IPFV} ‘roar’	MP
	<i>cvokotati</i> _{IPFV} ‘shiver’	MP
	<i>cvrčati</i> _{IPFV} ‘chirp’	MP
	<i>fijukati</i> _{IPFV} ‘whistle’	MP
	<i>hujati</i> _{IPFV} ‘bluster’	MP
	<i>mukati</i> _{IPFV} ‘moo’	MP
	<i>pijukati</i> _{IPFV} ‘cheep, pip’	MP
	<i>prašťati</i> _{IPFV} ‘crack’	MP
	<i>romoriti</i> _{IPFV} ‘murmur’	MP
	<i>zviždati</i> _{IPFV} ‘whistle’	MP
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