Correlation between expressiveness and syntactic independence of Russian onomatopoeic verbal interjections[*]

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This article considers Russian onomatopoeic verbal interjections, because these linguistic units possess a unique grammatical feature of being either completely syntactically independent or act as members of sentence, depending on the context and speaker's communicative intention. Moreover, there is ambiguity concerning their expressiveness. In some cases, they are prosodically foregrounded and have reduplicated morphemes, in others no pauses in speech separate them from the host construction and no expressive morphology is demonstrated. This research aims at establishing correlation between the prosodic/morphological expressiveness and syntactic independence of Russian onomatopoeic verbal interjections with the help of a statistical model. Firstly, corpus analysis of data from the Russian Corpus of Spoken Language is applied in order to examine the expressiveness of these linguistic units, as well as to investigate their syntactic independence. Finally, a Log-Linear Statistical Model is applied to establish the dependencies between the absence/presence of these three features, and to determine which of these have significant correlations.

1. Introduction

The controversy concerning the interjection as a part of speech has continued unabated for half a century. Due to the complexity of such linguistic units as Russian onomatopoeic verbal interjections (words like *xljup, brjak, bax,* and *ščelk,* translated into English as 'squelch', 'flop', 'bang', and 'click' accordingly), they have been considerably neglected in linguistic theory. Nevertheless, several attempts have been made to study the nature of these words. They have

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been referred to as "interjectional predicates" (Kor Chahine 2008), "verboids" (Nikitina 2012), "onomatopoeic interjections" (Viimaranta et. al., 2016). They have also been described in the 1980 Russian Grammar as "verbal interjections" (Švedova 1980, vol. I, ch. 1701), where it is stated, that verbal interjections coincide with onomatopoeic words by their form and functions (Ibid.). Given the complexity of these linguistic units they are simultaneously attributed to onomatopoeias, interjections and predicates. To date little is known about the connection between the nature of onomatopoeic verbal interjections and their syntactic representation; it also remains unclear what factors influence the choice of punctuation marks used with them. It has been established though, that in those cases where they are not separated from the host construction by punctuation marks, they have a predicative function, i.e. become syntactically integrated (Kanerva and Viimaranta 2018). For example:

(1)   Pered nim bux na koleni dve kakie-to m... èti monaški
       before he-INSTR flop-INTJ on knee-ACC.PL two some m... these nun-NOM.PL
       '(two) some kind of n...nuns fall on their knees in front of him'

This article claims that the predicative position is the only position in which syntactic integration is explicitly expressed by the absence of punctuation marks, which would separate the onomatopoeic verbal interjection from the rest of the sentence. Grammatical integration is also expressed by the case government of nouns, which follow or precede the onomatopoeic verbal interjection in question. In example 1, the noun phrase *'dve kakie-to monaški'* is a subject, as a result the numeral, pronoun and noun take the Nom. Case; *'na koleni'* is an object, the noun in it is governed by the predicate *'bux'* and takes an oblique case.

Over the last decades, cross-linguistically there has been a noticeable increase in interest in units similar to Russian onomatopoeic verbal interjections. In Polish, "iconic depictives" refer to action in a semi-iconic way and are used as substitutes for predicates (Wierzbicka 2003, 290). In Czech "onomatopoeic expressions" can be embedded into syntax in various ways, i.e. they can occupy a syntactic slot of a subject, object, predicate, or function as a clause (Fidler 2014, 31). In Finnish, "imitatives" or "onomatopoeic interjections" are expressive words, often accompanied by gestures (Jääskeläinen 2013). They do not only describe sounds, but also manner of action, qualities of things and events; syntactically, they mainly form constructions similar to those of interjections (Ibid., 341). What is more, Finnish imitatives differ from Russian words like xljup, brjak, bax in the way that they cannot act as predicates; this function is typical of verbs with the same stem only (Viimaranta et.al. 2016, 7). From a broader perspective, Russian onomatopoeic verbal interjections are also associated with such onomatopoeic words as ideophones (Voeltz and Kilian-Hatz 2001, Katsuki-Pestemer 2014) and a concept of sound symbolism (Nuckolls 1992). Morphosyntactically, ideophones in Japanese can be used as adverbs, adjectives and nouns (Katsuki-Pestemer 2014, 254). Typological data suggests that expressiveness of ideophones and their morphosyntactic integration are interconnected. For example, in Siwu, ideophones tend to lose their expressive features if they are integrated in the morphosyntax (Dingemanse 2013). In Pastaza Quechua of Ecuador, ideophones are more foregrounded if they are syntactically displaced and go together with the pause (Nuckolls 1996, 72). A study of Japanese ideophones shows that there is an inverse relation between their expressiveness and grammatical integration

(Dingemanse and Akita 2017). Reduplication of morphemes, prosodic foregrounding and the position of ideophones at clause edges make them expressive (Dingemanse 2012).

A general conclusion can be made about the common features between these groups of words: they all have a certain degree of expressiveness in combination with relatively poor grammatical integration. The aspect of the correlation between expressiveness and grammatical independence has not yet been studied with regard to Russian onomatopoeic verbal interjections.

The hypothesis presented in this article is that Russian words like *xljup, brjak, bax*, and *ščelk* if separated by punctuation marks from the host construction in writing, would also be separated by pauses in speech, and would contain repeated or reduplicated morphemes.

The aim of this article is: (1) to examine expressiveness, as measured by intonational foregrounding and expressive morphology (reduplication of morphemes and repetition of words in particular); (2) to investigate syntactic independence, in terms of construction types (separate sentences/clauses are less integrated); (3) to prove statistically that there is a correlation between prosodic/morphological expressiveness and syntactic independence.

This article considers such instances of syntactic independence as: 1) when an onomatopoeic verbal interjection constitutes a separate sentence; 1) when it is separated from the host construction by punctuation marks on both sides. In this study expressiveness is understood in a two-fold sense: 1) first of all, as "intonational expressiveness", which can be defined as the degree to which certain items are foregrounded as distinct from other items (Dingemanse and Akita 2017: 505); 2) secondly, as "morphological expressiveness", which can be defined as a kind of derivational morphology involving repetition of words and reduplication of morphemes in particular, including those that differ by one sound (Zwicky and Pullum 1987, 334-335). Plain morphology in its turn refers to "the ordinary productive (or nonproductive) word-formation or word-structure rules of a language" (Ibid., 332). This article concentrates on pauses in speech as one of the instances of "prosodic foregrounding"[1].

2. Expressiveness of interjections

Expressiveness can be manifested in various ways, such as, volume, use of uppercase letters, lengthening, and use of nonconventional sounds. This article will concentrate on expressiveness at prosodic and morphological levels. In particular, it studies such instances of expressiveness as: 1) intonational foregrounding, that is the presence of pauses in speech; 2) morphological foregrounding, which is the repetition or reduplication of morphemes. The aim of this research is to investigate how syntactic independence correlates with prosodic and morphological expressiveness.

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[1] The term "foregrounding" is traditionally used in discourse analysis in the sense that is used by Hopper and Thompson (1980, 290) to refer to "the material which supplies the main points of the discourse", as opposed to something in the "background" which "merely assists, amplifies or comments on it" (Ibid.). In Dingemanse and Akita (2017, 505), "foregrounding" is understood as 'the use of the devices of the language in such a way that this use itself attracts attention' (Havránek 1964, 10). This article concentrates on pauses which constitute one of the instances of "prosodic foregrounding" (see Chernov, Setton and Hild 2004, 151 for other prosodic devices of foregrounding).

Traditionally, onomatopoeic words and iconic depictives (e.g., animal cries and imitative sounds) are viewed as a sub-class of interjections (see Sapir 1912, Švedova 1980, Karcevskij 1984, Kryk 1992, Wierzbicka 2003, Cuenca 2006). Several lines of evidence suggest that interjections, when understood as a word class in general, belong to expressive vocabulary. Traditionally, they are defined "as words having reference to given types of psychic reaction and arousing an expectation of use in reference to a particular mood, attitude, or desire presently experienced by the speaker" (Gardiner 1932, 316). Jakobson (1960) also defines interjections as emotive words, which are focused on the addresser by expressing the speaker's attitude. Révész (1946) also assigns an expressive function to interjections and places them outside language. Similar ideas are expressed by other scholars, with interjections being characterized as "purely emotive words which have no referential content" (Quirk et al. 1972, 413).

Ameka (1992, 112-113) argues that "some interjections are made of sounds that are not found elsewhere in the language system". It is typologically accepted, that the use of unusual sounds in interjections is a widespread phenomenon, i.e. interjections are very language specific (Wierzbicka ed. 2003, Hinton et al. 1994, Viimaranta et. al. 2016).

Analyzing Russian interjections Vinogradov (1986, 45) defines such characteristic features of interjections as a specific intonational contour, a syntactic disorganization, a morphological indivisibility, an affective colouring and having a connection to gestures, which effectively separates them from other words. These properties are illustrated by the utterances given below:

(2)   A-ga-ga-go-go-babax-a-brr-INTJ! Bax-bax-bax-INTJ! Rra-ra-ra-INTJ!
(3)   Polnoči: traxbax!/traxbax!/ trax!/
       'for half a night: bang-bang!-INTJ/ bang-bang!-INTJ / bang!-INTJ/'
(4)   Tararáx, / Vaše veličestvo!
       'bang-INTJ, / Your Majesty!'

These examples are taken from the Corpus of Spoken Russian. Interjections in them demonstrate unique intonational, morphological and syntactic representation. They are constituted by unusual sounds; some of them are separated by pauses in speech from other utterances or their parts. These linguistic units are not inflected, but host repeated or reduplicated morphemes; some of them are hyphenated, others are not. They are syntactically mobile, context sensitive, and either form separate sentences or clauses. These features put them aside from other word classes.

At this point, it is important to conclude that onomatopoeic interjections cross-linguistically belong to expressive vocabulary. The same statement applies to Russian interjections in particular. Given the absence of a clear definition of Russian onomatopoeic verbal interjections, I will characterize them as invariable linguistic units, which do not contain inflectional or derivational morphemes; aim at depicting acoustic events or indicating kinetic imagery; in some contexts express suddenness in connection with an indicated action; and function syntactically as independent utterances/clauses or become grammatically integrated by taking a predicate. They combine onomatopoeic, verbal and interjectional features, which places them in-between these categories. Being able to

demonstrate considerable sound-symbolism, these words are clearly expressive; however, when onomatopoeic verbal interjections have a predicative function, a certain neutralization of their expressiveness seems to take place.

3. Grammatical independence of interjections

In this article, as stated previously, a linguistic unit is regarded as syntactically independent when it constitutes a separate sentence or is separated from the host construction by punctuation marks on both sides.

With regard to the traditional views on the interjection, it is considered "an invariable and syntactically independent linguistic form that typically indexes a change in the emotional or cognitive state of the speaker" (Heine et.al. 2013, 171). According to Wilkins (1992, 124), an interjection is "a conventional lexical form which (commonly and) conventionally constitutes an utterance on its own, (typically) does not enter into construction with other word classes, is (usually) monomorphemic, and (generally) does not host inflectional or derivational morphemes". A number of authors have regarded interjections as not being members of a sentence but their equivalents (Jakobson 1960, 354) or "minor sentences" (Bloomfield 1933, 176).

In the description of Russian interjections, constructions with them have been considered to stand "outside the sentence" (Ovsâniko-Kulikovskij 1912, 34), to be "syntactically completely isolated" (Ščerba 1928, 9), or "externally attached" (Meščaninov 1945, 291). According to Germanovič (1966, 93), as part of a simple sentence, intonationally detached interjections function as introductory and inserted components. Peškovskij (1928, 404-411) attributes interjections to introductory clauses, that is to the same group of words and phrases, which do not form sentences or parts of sentences. All of the studies reviewed here share the same idea about the syntactic independence of interjections.

More recent studies regard constructions with interjections as interjectional clauses. They are commonly included in a broader syntactic category referred to as "parenthetical clauses" (Kaltenböck 2007, 31 with reference to Huddleston and Pullum 2002, 1360–1361, Ziv 1985, 190, Petola 1983, 107–108). There is a consensus among linguists that parentheticals are syntactic units which are inserted in the host construction and lack an explicit syntactic link with it, being an independent syntactic constituent (Espinal 1991, 727; Kaltenböck 2007). Traditionally, parentheticals are considered to be marked off from the host construction by punctuation and intonation (Hoffmann 1998, 300). A number of studies, however, suggest that intonation is an unreliable criterion to identify parentheticals (Wichmann 2001: 186, Espinal 1991, 734). Moreover, "pragmatically isolated parentheticals such as vocatives or interjections are prosodically isolated, regardless of their syntactic make-up" (Güliz and Çöltekin 2015, 287). The relationship between pauses and punctuation marks cannot be regarded as interdependent, a view also supported by Bolinger (1989, 18). Thus, the correlation between syntactic independence and intonational expressiveness should not be perceived as self-evident, but needs to be studied separately.

All these studies seem to suggest that the interjection as a word class tends to share such grammatical feature as syntactic independence from the host-construction. This is determined by the fact that traditionally interjections are viewed as peripheral, optional, and

morphosyntactically isolated linguistic units, which is assumed to guarantee their grammatical independence.

4. Dialectics of onomatopoeic verbal interjections: expressiveness vs. grammatical integration

Grammatical integration refers to the degree to which linguistic units are embedded in the morphosyntactic structure of the utterance. It can depend on various factors, e.g. syntactic position, incorporation into syntactic structure, and optionality/interchangeability of use.

Typological evidence suggests that onomatopoeias might be integrated into a sentence in various ways. For examples, African ideophones can function as adverbs (Samarin 1965, 118), adjectives (Newman 1968, 113) or verbs (Fortune 962, 4).

Russian onomatopoeic verbal interjections can also take the syntactic slot of a subject, object, modifier or a clause, but in these cases punctuation would separate them from the rest of the sentence (Kanerva and Viimaranta 2018). For example, an onomatopoeic verbal interjection functions as an adverbial modifier in *...i vdrug – bac, cto-to proisxodit!*; it is a subject in *...pljux – razdalos' sovsem blizko*; and a direct object in *tol'ko i slyšalos': bax! bax!.* Although, in all these examples onomatopoeic verbal interjections are employed as nouns and adverbs, they are still quotations (see Oswalt (1992, 302) for comparison with similar grammatical constructions in English or in Section 5 of this article). Only when acting as predicates they can be regarded as syntactically integrated. This is their distinctive feature, which puts them apart from onomatopoeias in other languages.

Needless to say, that a great degree of confusion concerning the status of onomatopoeic verbal interjections is demonstrated by a number of respected scholars. Making a clear distinction between onomatopoeic interjections and verbal interjections, Karcevskij (1984, 127-129) insists that they both belong to expressive vocabulary. Onomatopoeic interjections depict animal cries (e.g. *kukareku*, Eng. 'cock-a-doodle-doo') or natural noises (e.g. *bux*, Eng. 'bang'), including sounds produced by human body (e.g. *čmok*, Eng. 'smack'). From his point of view, onomatopoeias are as such linguistic units which function in a similar way the direct speech or quotations (Ibid., 130). Onomatopoeic interjections, which imitate unexpected natural sounds and refer to acoustic imagery, gave rise to verbal interjections (e.g. *bux, bac, xrus'*), which depict kinetic events. When they have a predicative function, they are not interjections any more, they acquire verbal characteristics, such as aspect, tense, sometimes transitivity and voice (Ibid., 131). This line of reasoning is reminiscent of the opposition between description and depiction (Clark and Gerrig 1990). While internally, interjections still depict kinetic imagery by quoting it, externally, they become embedded into another utterance by being predicates.

The 1980 Academy Grammar claims that verbal interjections belong to the class of interjections. They identify frequent, sharp and swift movements, and coincide in form and function with primary onomatopoeias (Švedova 1980 I, §1701). Such generalization is made on the basis of their morphological invariability and semantic similarity. In general, syntactically interjections are inserted into sentences, either as syntactically independent words or as a part of the sentence (Švedova 1980 II, § 2217). Verbal interjections in particular carry the same syntactic features but express suddenness (Ibid., § 2219).

Česnokova (1991, 181-189) further expands the classification by adding one more subgroup: (1) onomatopoeic words (e.g. *bam, bom, din'*), which differ from ultrapunctual aspect verbs;

(2) ultrapunctual aspect verbs (e.g. *tolk, pryg, skok*), which differ from onomatopoeic words; (3) syncretic forms (e.g. *bax, xrus', tres'*) combining features of both onomatopoeic words and ultrapunctual aspect verbs. Syntactically, these units can either stand outside the sentence and be omitted, function as direct speech within an utterance, or become members of a sentence, being able to be substituted with notional words. This feature she explains by means of syncretism between different grammatical classes (Ibid.).

Scholars tend to explain a different degree of syntactic independence to these linguistic units resorting to the notion of homonymy or syncretism of grammatical forms. This article challenges this line of reasoning, aiming at proving that such equivocal linguistic behavior is determined by their complex nature, i.e., their two-fold attribution to onomatopoeic words and verbal interjections. Thus, expressiveness of verbal onomatopoeic interjections and their grammatical integration into a language system are inversely correlated. Depending on which feature (sound-symbolic or verbal) is manifested more in each context, these linguistic units obtain a higher or lower degree of syntactic independence, prosodic foregrounding, and morphological expressiveness.

5. Conventionalization vs iconicity in Russian onomatopoeic verbal interjections

This article asserts that the expressiveness of Russian onomatopoeic verbal interjections is connected with a depictive mode of representation. As a result, these words act like "quotations" in Clark and Gerrig's (1990) terms, especially when they form an utterance of their own. Like other quotations, they are demonstrations, which, so to say, quote, i.e. iconically depict natural sounds. However, when the speech situation does not allow it and they have to be inserted into the host construction, punctuation marks effectively separate them from the rest of the sentence. In this case, they preserve their capacity to depict, rather than to describe, despite being formally inserted, and to some extent embedded[2] into the narrative.

Clark (1996), using Peirce's (1931-36) classification of signs, suggested that icons, indexes and symbols are represented through acts of depicting, indicating and describing. "Descriptions are typically arbitrary, without a motivated link between form and meaning. They encode meaning using strings of symbols with conventional significations" (Dingemanse 2015, 950). Thus, conventionalized words constitute the language system. Their mode of representation is descriptive, like of all symbols. On the other end of this scale are icons. Icons perceptually resemble their object representation (Clark 1996, 157) and as a result, their method of signaling is by demonstration (Ibid., 160). Finally, an index is a sign that designates its object "because it is in dynamical (including spatial) connection both with the individual object, on the one hand, and with the senses or memory of the person for whom it serves as a sign" (original punctuation, Ibid. 157).

Onomatopoeic words are sound quotations. Sometimes they carry descriptive content as in English constructions of the type "to go + onomatopoeic word" (Clark and Gerrig 1990, 788-

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[2]Clark and Gerrig (1990, 771-772) talk about embedded quotations, an essential property of which is that their external and internal structures are to some extent independent from each other. Internally, they depict events, states, processes, or objects by quoting them, while externally, they can be embedded into another utterance.

789). According to Oswalt (1994, 302), in expression such as *the cork went pop*, an inanimate imitative *pop* has an adverbial use, describing the manner in which the cork went. From my point of view, the same behaviour is illustrated by Russian onomatopoeic verbal interjections when they have a predicative function. Moreover, these linguistic units tend to give rise to "basic noun and verb derivatives", which often undergo semantic extensions and shifts resulting in the sound not being central to the meaning (Ibid.). As a result, they lose their expressiveness. Kor Chahine (2008, 157), analysing the evolution of Russian words like *xljup*, *brjak,* and *ščelk,* claims that they first underwent a semantic shift from depicting sound to indexing action in connection with this sound, i.e. they lexicalized into predicates. The next stage of this process was a further lexicalization of predicates into verbs (Ibid.). Following the discussion by Rhodes (1994: 278-281) concerning the degrees of conventionality in onomatopoeias, onomatopoeic verbal interjections belong to "semi-wild forms". They are conventionalized imitations (e.g *xrust′*), which have to be distinguished from "wild" sound symbolism (e.g. *xrrr*) and "tame words", i.e. noun (e.g. *xrust, xrustenie*) and verb derivatives (e.g. *xrustet′, xrustnut′*).

It is important to mention that an onomatopoeic verbal interjection with a predicative function is still more expressive than a conjugated verb that can potentially fill the same syntactic slot. These linguistic units "differ from inflected verbs by not encoding general concepts, but rather pointing directly to particular instances of events" (Nikitina 2012: 165). Their meaning is indexical, as opposed to purely symbolic. Syntactically independent onomatopoeic verbal interjections iconically depict sounds. Their mode of representation is depictive.

Clark (1996, 159) puts forward a very important observation that "a single sign may have iconic, indexical, and symbolic properties".

The process of semiosis with regard to Peirce (1931–36, vol. II) in the case of onomatopoeic verbal interjections follows the direction of an increase in conventionality at the expense of a gradual demotivation of their meaning. Consequently, the higher the degree of iconicity and sound symbolism that verbal onomatopoeic interjections demonstrate, the more foregrounded they should be.

In my opinion, this observation accurately depicts the nature of Russian onomatopoeic verbal interjections. Their lack of derivational and inflectional morphemes and a concise form allows them to be quite free within the sentence structure, thus, guaranteeing them a greater degree of syntactic independence. In other words, they are syntactically mobile, can appear in an initial, final or inner sentence position, or can be omitted without affecting the meaning of the utterance. The verbal root in its turn enables them to act like predicates and to become syntactically integrated.

6. Material and method

6.1. Corpus data

The Corpus of Spoken Russian contains the recordings of public speeches, private conversations, and the transcripts of Russian feature films. The lexical, morphological and semantic queries are available. All the utterances in this Corpus are supplied with prosodic

marking. The pauses in speech are also marked[3]. This feature was the primary reason why the spoken Corpus was chosen for the current research. Taking into account, that the size of the spoken Corpus is noticeably smaller than that of the main Corpus, a search for all interjections was made to discover which ones were present in the spoken corpus. This gave 3,272 documents with 490,018 hits, through which I further scanned. Having consulted the Russian Grammar Dictionary by Zaliznjak (1977) and the Large Explanatory Dictionary of the Russian Language by Kuznecov (1998), I obtained a selection of 15 onomatopoeic verbal interjections from the total number of words marked as interjections in the spoken Corpus. The selected words had to be marked both as interjections and predicates in Zaliznjak (1977) and there had to be a description of the sound each of them depicts in Kuznecov (1998). The list of words, which met these demands, is the following: *bax, bac, brjak, bux, kap, skrip, top, trax, tuk, tjap, xlop, xljup, čik, čmok, ščelk.*

It is important to specify that *xljup* was not mentioned in Zaliznjak (1977) but Kuznecov (1998) characterized it as an interjection and a predicate accompanied with corresponding acoustic sensations. As a result, it is also included in the list.

A search was made for each of the selected words separately in the Corpus of Spoken Russian. It was discovered that *skrip, tjap* and *kap* were not interjections (*skrip* was a noun in all search results[4], *kap* was a short form of the word "capital" and proper nouns, and *tjap* was used as a part of colloquial *tjap-ljap).* Finally, the corpus of my study was formed by 12 verbal onomatopoeic interjections (*bax, bac, brjak, bux, top, trax, tuk, xlop, xljup, čik, čmok, ščelk*) and the 203 tokens in which they were featured.

As stated before, the strong point concerning the Corpus of Spoken Russian is that it contains prosodic markings, which made this research possible. At the same time, all the exemplifying sentences, which constitute the corpus of this study, lacked punctuation marks. In order to proceed with the analysis of this data-set, a specialist in Russian, who is not familiar with the topic of my work, was asked to put punctuation marks where necessary in accordance with the grammatical principles of Russian punctuation. The results of the editorial process were reviewed independently by another linguist, specializing in Russian, who was from a different institution, and who was not familiar with the topic although also a native speaker of Russian.

The retrieved data-set was analysed for recurrence of intonational foregrounding, syntactic independence, and expressive morphology in each utterance. The examples below feature the prosodic marking as recorded in the Corpus, where a pause in speech is indicated by a slash (or /) symbol. An onomatopoeic verbal interjection constituting a separate sentence or clause (i.e. when separated from the rest of the sentence by punctuation marks from both sides) suggests its syntactic independence. Repetition of an onomatopoeic verbal interjection (e.g. *ščelk-ščelk*) and reduplication of its morphemes (e.g. *ba-bax, trah-tararah*) are the ways to convey expressiveness on the level of a word. Separation of an onomatopoeic verbal interjection from the host construction by pauses on both sides points to intonational

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[3]More detailed information about the Corpus, its size and the notations used in it is provided by Grišina (2005), Grišina and Savčuk (2009).

[4]The Corpus contained 4 sentences with *skrip*, in which either the verbs or prepositions required a certain case from it when it was an object; or it required the verb to agree with it in gender/number when it was a subject.

foregrounding.   The utterances below illustrate how Russian onomatopoeic verbal interjections exhibit these characteristics and the correlation between them:

(5)   ... / i vsegda èto zdes' kak-to tonet, / xljup-xljup-xljup / – i netu...

and always this here somehow-PRT drown-PRES.3P.SG, / squelch-squelch-squelch-INTJ/ – and nothing...

'and everything always drowns here somehow, squelch-squelch-squelch – and disappears...'

(6)   ja, / kak vižu ee, / tak prjam brjak na koleni.

I, when see- PRES.1P.SG she-ACC, / then immediately flop-INTJ on knee-ACC.PL

'each time I see her, immediately fall on my knees'

(7)   Štirlic / – bax! – / upal.

Stierlitz-PROP.N / – bax!-INTJ – / fall-PAST.3P.SG

'Stierlitz – bang! – fell down'

(8)   Speaker 1: ščelk/-ščelk/-ščelk/.

Speaker 2: a počemu, / a počemu ja dolžen vyključat', / e-e, / to, / čto ja slušaju?

Speaker 1: click/-click/-click-INTJ/.

Speaker 2: and why, / and why I should turn off-INF, em-INTJ, / that, what I listen-PRES.1SG

'Speaker 1: click-click-click.'

'Speaker 2: and why, and why should I turn off, em, what I am listening?'

All the examples illustrate how syntactic, prosodic and morphological expressiveness correlate. In example 5, the onomatopoeic verbal interjection is separated from the host construction by punctuation marks on both sides (i.e. it constitutes an interjectional clause); it is also separated in speech by pauses, and it is repeated three times. Example 6 shows the absence of these features. The onomatopoeic verbal interjection has a predicative function, no punctuation marks are used to separate it from the rest of the sentence, and there are no pauses or repeated/reduplicated morphemes. Example 7 demonstrates that the onomatopoeic verbal interjection is inserted into the utterance and it is marked off with paired punctuation marks. In example 8, the studied linguistic unit is not only repeated three times, separated by pauses on both sides, but also constitutes an independent utterance.

6.2. Method

I have used the statistical program SPSS Statistics24 to analyse the data for presence/absence of the above-mentioned features. Needless to say, that the analysed variables, depending on whether the feature is present or not, form eight possible combinations (1:1:1, 1:1:2, 1:2:1, 1:2:2, 2:1:1, 2:1:2, 2:2:1, 2:2:2), where "1" means that the feature is absent, and "2" that it is present. The results are shown in the Cross tabulation table below. The numbers refer to the number of tokens from the Corpus demonstrating the presence/absence of the studied features. It is also important to mention that repeated onomatopoeic verbal interjections are counted only once.

		Absence of reduplicated/repeated morphemes	Presence of reduplicated/repeated morphemes	Total
Syntactically integrated	Absence of intonational foregrounding	43	7	50
	Row percentage	21.2%	3.4%	24.6%
	Presence of intonational foregrounding	1	1	2
	Row percentage	0.5%	0.5%)	1%
Syntactically independent	Absence of intonational foregrounding	28	6	34
	Row percentage	13.8%	3.0%	16.7%
	Presence of intonational foregrounding	56	61	117
	Row percentage	27.6%	30.0%	57.6%
Total		128	75	203
Row percentage		63.1%	36.9%	100%

Table 1: Crosstabulation table between intonational foregrounding, morphological expressiveness and syntactic independence

The figures in this table demonstrate that 151 tokens out of 203 are syntactically independent, 119 out of 203 are intonationally foregrounded, and 128 out of 203 do not contain expressive morphology. This table also shows that the combination 1:1:1 (not intonationally foregrounded, not syntactically independent, not morphologically expressive) appears in 43 cases out of 203 (in 21.2% of all utterances), and the combination 2:2:2 (intonationally foregrounded, syntactically independent, morphologically expressive) in 61 cases (30.0%). Together these two combinations out of a possible eight constitute 51.2% of all sentences featuring verbal onomatopoeic interjections. These results show that all three variables co-occur together with a high level of frequency (>50%), i.e. these two combinations (1:1:1 and 2:2:2) are highly frequent in comparison with the remaining six combinations.

It is important to say, that a cross tabulation table has been used, because with its help it is convenient to examine the correlation between two categorical variables. As regards to analysing the dependencies between the three categorical variables, it is difficult to retrieve accurate statistical data about which one of the six co-variables does not correlate well. A Log-linear Statistical Model allows this, as far as it is based on a logarithm of the observed

cell frequencies in the sample. Using this method, it is possible to determine which model component (co-variable) should be retained in order to best account for the data.

As it has already been mentioned, the Log-Linear Statistical Model is used in order to analyse which correlations are significant and which co-variables do not correlate. The model in general is good, judging by the p-value from the Goodness-of-fit test (The Likelihood Ratio is 0.902, Pearson's correlation coefficient is 0.901), which closely approximates to 1. The Standardised residuals are between -0.265 and +0.322; such a small margin between them also indicates that this statistical model is good.

Although, the correlation between syntactic independence and expressive morphology is not significant (p=0.662), the generating class shows good dependencies (0.901≤p≤0.902) between all three variables (intonational foregrounding, syntactic independence and expressive morphology). These results show that despite the fact that syntactically independent onomatopoeic verbal interjections do not necessarily have repeated syllables or that reduplicated onomatopoeic verbal interjections are not always separated by punctuation marks from the host-construction, all three parameters are highly likely to appear together. In other words, there is a high correlation between intonational foregrounding, syntactic independence and expressive morphology. This is the primary conclusion, which can be drawn from the model itself.

The next step was to use Descriptive statistics in order to analyse in detail how exactly all these factors correlate in the model, i.e. which of them are important, and which do not have a decisive influence. Cross tabulation of the absence/presence of each feature in two out of three variables has revealed hidden dependencies and has cast light on the reasons why all the three factors that are statistically significant often co-occur together, but syntax and morphology have been determined by the model as independent variables.

The results are given as follows:

1) 77.5% of all syntactically independent verbal onomatopoeic interjections are intonationally foregrounded, while 96.2% of all non-independent are not foregrounded; 98.3% of all intonationally foregrounded are syntactically independent, while 59.5% of those not foregrounded are not independent.

2) 84.5% of all not intonationally foregrounded are not morphologically expressive, while 52.1% of intonationally foregrounded are expressive; 55.5% of those not expressive are not foregrounded, while 82.7% of the expressive are foregrounded.

3) 84.6% of all not syntactically independent are not morphologically expressive, while 44.4% of the syntactically independent are expressive, 89.3% of the expressive are independent, while 34.4% of those not expressive are not independent.

If result 1 and 2 illustrate clear dependencies between intonation and syntax, as well as intonation and morphology; result 3 demonstrates that syntax and morphology correlate poorly among themselves.

The following conclusions from the descriptive statistical analysis (cross tabulation of three variables) can be drawn:

1) if an onomatopoeic verbal interjection is morphologically expressive, it is highly likely to be intonationally foregrounded and vice-versa (>80% in both cases);

2) if an onomatopoeic verbal interjection is intonationally foregrounded, it is likely to be syntactically independent and vice-versa (>90% and >75% respectively);

3) if an onomatopoeic verbal interjection is morphologically expressive, it is likely to be syntactically independent (≈90%), BUT if it is syntactically independent, it does not have to be morphologically expressive (<50%).

7. Concluding remarks

Cross-linguistically, most interjections demonstrate a certain degree of expressiveness in combination with relatively poor grammatical integration. They are usually syntactically independent from their environment, they are set off prosodically and punctuationally from the rest of the utterance, their meaning is non-restricted, which makes elicitation possible. Russian onomatopoeic verbal interjections in their turn also belong to expressive vocabulary; they are intonationally foregrounded. In recorded utterances from the Spoken Corpus of Russian, they can either represent full sentences, form parenthetic constructions or be syntactically integrated. The Log-Linear Statistical Model used in this article has proved that there is a statistically significant (p≈1 from the Goodness-of-fit test) correlation between prosodic/morphological expressiveness and syntactic independence. In more detail this means that: the morphologically expressive onomatopoeic verbal interjections are highly likely to be intonationally foregrounded and vice-versa; the intonationally foregrounded are mostly syntactically independent and vice-versa; morphologically expressive interjections are predominantly syntactically independent. However, syntactic independence does not guarantee that they will be morphologically expressive.

References

Ameka, Felix. 1992. "Interjections: The universal yet neglected part of speech". *Journal of Pragmatics* 18(2/3): 101-118.

Bloomfield, Leonard. 1933. *Language.* London: George, Allen & Unwin.

Bolinger, Dwight. 1989. *Intonation and its Uses. Melody in Grammar and Discourse.* London: Edward Arnold.

Česnokova, Lilija D. ed. 1991. *Russkij jazyk: Trudnye slučai morfologičeskogo razbora.* Moscow: Vysšaja škola.

Chernov, Ghelly V., Setton, Robin & Hild, Adelina. 2004. *Inference and anticipation in simultaneous interpreting: A probability-prediction model.* John Benjamins.

Clark, Herbert H. 1996. *Using Language.* Cambridge/New York: Cambridge University Press.

Clark, Herbert H., and Gerrig, Richard J. 1990. "Quotations as Demonstrations". *Language* 66 (4): 764-805. https://doi.org/10.2307/414729

Cuenca, Maria Josep, 2000. "Defining the indefinable? Interjections". *Syntaxis 3*, 29-44.

Dingemanse, Mark. 2012. "Advances in the cross-linguistic study of ideophones". *Language and Linguistics Compass* 6: 654–672.

Dingemanse, Mark. 2013. "Ideophones and gesture in everyday speech". *Gesture* 13 (2): 143–165. https://doi.org/10.1075/gest.13.2.02din

Dingemanse, Mark. 2015. "Ideophones and reduplication: Depiction, description, and the interpretation of repeated talk in discourse". *Studies in Language* 39(4): 946-970.

Dingemanse, Mark, and Kimi Akita. 2017. "An inverse relation between expressiveness and grammatical integration: on the morphosyntactic typology of ideophones, with special reference to Japanese". *Journal of Linguistics* 53(3): 501-532.

https://doi.org/10.1017/S002222671600030X

Espinal, Maria Teresa. 1991. "The representation of disjunct constituents". *Language* 67 (4): 726–762. https://doi.org/10.2307/415075

Fidler, Masako Ueda. 2014. *Onomatopoeia in Czech: a conceptualization of sound and its connections to grammar and discourse.* Bloomington, IN: Slavica Publishers.

Fortune, George. 1962. *Ideophones in Shona.* London: Oxford University Press.

Gardiner, Alan. 1932 (1969). *The theory of speech and language.* Oxford: Clarendon.

Grišina. Elena A. 2005. Ustnaja reč′ v Nacional′nom korpuse russkogo jazyka. In *Nacional′nyj korpus russkogo jazyka:* 2003–2005, 94–110. Moscow: Indrik, 2005 // http://ruscorpora.ru/sbornik2005/07grishina.pdf

Grišina Elena A. and Savčuk, Svetlana O. 2009. Korpus ustnyx tekstov v Nacional′nom korpuse russkogo jazyka: sostav i struktura. In *Nacional′nyj korpus russkogo âzyka: 2006–2008. Novye rezul′taty i perspektivy,* 129–149. Saint-Petersburg: Nestor-Istorija // http://ruscorpora.ru/sbornik2008/07.pdf

Güliz Güneş and Çağrı Çöltekin. 2015. "Mapping to prosody: Not all parentheticals are alike". In *Parenthetical Verbs*, edited by Avanzi, Mathieu, Julie Glikman, and Stefan Schneider. Berlin/Boston: De Gruyter Mouton, 287–332.

Havránek, Bohuslav. 1964. "The functional differentiation of the standard language". In *A Prague School reader on aesthetics, literary structure, and style,* edited by Paul L. Garvin, 3–16. Washington, DC: Georgetown University Press.

Heine, Bernd, Gunther Kaltenböck, Tania Kuteva, and Haiping Long. 2013. "An Outline of Discourse Grammar". In *Functional Approaches to Language*, edited by Shannon Bischoff and Carmen Jany, 155-206. Berlin/Boston: De Gruyter Mouton.

Hinton, Leanne, John J. Ohala, and Johanna Nichols. 1994. *Sound Symbolism.* Cambridge: Cambridge University Press.

Hoffmann, Ludger. 1998. "Parenthesen". *Linguistische Berichte* 175: 299-328.

Hopper, Paul J. and Thompson, Sandra A. 1980. "Transitivity in Grammar and Discourse". *Language: Journal of the Linguistic Society of America*, 56(2): 251-299. https://doi.org/10.1353/lan.1980.0017

Huddleston, Rodney and Pullum, Geoffrey K. 2002. *The Cambridge Grammar of the English Language.* Cambridge: Cambridge University Press.

Jääskeläinen, Anni. 2013. *Todisteena äänen kuva. Suomen kielen imitatiivi konstruktiot.* Helsinki: Unigrafia.

Jakobson, Roman. 1960. "Linguistics and poetics". In *Style in language*, edited by Thomas Albert Sebeok, 350-77. Cambridge MA: MIT Press.

Kaltenböck, Gunther. 2007. "Spoken parenthetical clauses in English". In *Parentheticals*, edited by Nicole Dehé and Yordanka Kavalova, 25-52. John Benjamins.

Kanerva, Oksana A. and Viimaranta, Johanna. 2018. "Funkcional′naja motivacija znakov prepinanija so zvukopodražatel′nymi glagol′nymi meždometijami". *Vestnik Tomskogo Gosudarstvennogo universiteta. Filologija* 52: 83–97.

Karcevskij, Sergej. 1984. "Vvedenie v izučenie meždometij". *Voprosy jazykoznanija* 6: 127-137.

Katsuki-Pestemer, Noriko. 2014. *An Introduction to Japanese Ideophones.* Muenchen: Lincom.

Kor Chahine, Irina. 2008. "Pljux! → pljux → pljuxnut'(sja). K voprosu ob èvoljucii narrativnyx predikativov v svete korpusnyx dannyx". In *Instrumentarij rusistiki: korpusnye podxody,*

edited by A. Mustajoki, M.V. Kopotev, L.A. Birjulin, E. Ju. Protasova. Slavica Helsingiensia 34: 152-162. Helsinki.

Kryk, Barbara. 1992. The pragmatics of interjections: The case of Polish no. *Journal of Pragmatics* 18: 193-207.

Kuznecov, Sergej A., ed. 1998. *Bol'šoj tolkovyj slovar' russkogo jazyka.* Saint Petersburg: Norint.

Meščaninov, Ivan I. 1945. *Členy predloženiâ i časti reči.* Leningrad: Izdatel'stvo AN SSSR.

Newman, Paul. 1968. "Ideophones from a syntactic point of view". *Journal of West African Languages* 5: 107-119.

Nikitina, Tatiana. 2012. "Russian verboids: A case study in expressive vocabulary". *Linguistics* 50 (2): 165-189. https://doi.org/10.1515/ling-2012-0007

Nuckolls, Janis B. 1996. *Sounds like life: Sound-symbolic grammar, performance, and cognition in Pastaza Quechua.* New York: Oxford University Press.

Oswalt, Robert L. 1994. "Inanimate imitatives in English". In *Sound Symbolism*, edited by Hinton, Leanne, Nichols, Johanna, Ohala, John J. Cambridge University Press, Cambridge, 293-308.

Ovsjanniko-Kulikovskij, Dmitrij N. 1912 *Sintaksis russkogo jazyka.* Izdanie vtoroe, ispr. i dop. Saint Petersburg: Izdatel'stvo, L.I. Ovsjanniko-Kulikovskoj.

Peirce, Charles Sanders.1931–36. *The Collected Papers.* Volumes 1–6, edited by Charles Hartshorne and Paul Weiss. Cambridge M.A.: Harvard University Press.

Peškovskij, Aleksandr M. 1928. *Russkij sintaksis v naučnom osveščenii.* Leningrad: Gosudarstvennoe izdatel'stvo.

Petola, Niilo. 1983. "Comment clauses in present-day English". In *Studies in Classical and Modern Philology,* edited by Iiro Kajanto, Inna Koskenniemi and Esko Pennanen, 101–13. Helsinki: Suomalainen Tiedeakatemia.

Quirk, Randolph, Greenbaum, Sidney, Leech, Geoffrey, and Jan Svartvik. 1972. *A grammar of contemporary English.* London: Longman.

Révész, Géza. 1946. *Ursprung und Vorgeschichte der Sprache.* Bern: Francke.

Rhodes, Richard. 1994. "Aural images". In *Sound Symbolism*, edited by Hinton, Leanne, Nichols, Johanna, Ohala, John J. Cambridge University Press, Cambridge, 276-92.

Samarin, William J. 1965. "Perspective on African ideophones". *African Studies* 24: 117-121.

Sapir, Edward. 1912. "The Takelma Language of Southwestern Oregon". Handbook of American Indian Languages. In *Bureau of American Ethnology Bulletin* 40.2:1-296. Washington, DC: Government Printing Office.

Ščerba, Lev V. 1928. "O častjax reči v russkom jazyke". *Russkaja reč'.* Novaja serija 2. Leningrad: Akademia.

Švedova, Natalija Ju., ed. 1980. *Grammatika russkogo jazyka.* Akademija Nauk SSSR, Moscow.

Viimaranta, Johanna, Aleksandrova, Anna A., Bogomolov, Alexey S., Pasmor, Ekaterina S. and Tikkanen, Laura. 2016. "Vodnye" vukopodražanija v finskom i russkom jazykach". *Jazyk i kul'tura* 1 (33): 6–24.

Vinogradov, Viktor V. 1986. *Russkij jazyk: Grammatičeskoe učenie o slove.* Izdanietret'je, ispr. Moscow: Vysšaja škola.

Voeltz, Erhard F. K., and Christa Kilian-Hatz, eds. 2001. *Ideophones.* Amsterdam, Philadelphia: John Benjamins.

Wichmann, Anne. 2001. "Spoken parentheticals". In *A Wealth of English. Studies in Honour of*

Göran Kjellmer, edited by Karin Aijmer, 177–193.Göteborg: Acta Universitatis Gothoburgiensis.

Wierzbicka, Anna. 2003. *Cross-Cultural Pragmatics: The Semantics of Human Interaction.* Mouton de Gruyter.

Wilkins, David. 1992. "Interjections as deictics". *Journal of Pragmatics* 18: 119-158

Zaliznjak, Andrej A. 1977. *Grammatičeskij slovarʹ russkogoj azyka. Slovoizmenenie.* Moscow: Russkij jazyk.

Ziv, Yael. 1985. "Parentheticals and Functional Grammar". In *Syntax and Pragmatics in Functional Grammar,* edited by A. Machtelt Bolkestein, Caspar de Groot, and J. Lachlan Mackenzie, 181–199. Dordrecht: Foris.

Zwicky, Arnold M., and Geoffrey K. Pullum. 1987. "Plain morphology and expressive morphology". *Proceedings of the Thirteenth Annual Meeting of the Berkeley Linguistics Society,* 330-340, Berkeley, CA: Berkeley Linguistics Society.

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