An unrecognized class of words in Bulgarian and their word-formation

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The paper discusses the word-formation in Bulgarian of a rare class of words known as ideophones. Alongside a closed set of basically onomatopoeic conventional ideophones, Bulgarian usage allows for the formation of deverbal ideophones. Most of them do not normally find their way into dictionaries but abound in oral narratives and in baby talk. New ones are usually created on the spur of the moment but their function is nevertheless immediately recognizable. An attempt is made to define the numerous constraints on the formation of this type of ideophones. As is to be expected for productive patterns (Plag 2003: 54), coinage of new deverbal ideophones is rare but regular – their formation predictably involves the truncation of suffixes marking person, number, tense and aspect, which makes them formally undistinguishable from the primary onomatopoeic ideophones, which are simplex words. The conclusions arrived at unequivocally speak in favour of a word-based model of morphology and a two-way storage in the lexicon. Without the notion of paradigmatic word-formation (Haspelmath & Sims 2010: 167, Plag 2003: 189, Booij 2008) the phenomenon would remain a puzzling idiosyncrasy. The concept of 'transitive analogy' is introduced in an attempt to reconcile a presumed incompatibility between analogy and rule-based productivity. In connection with theoretical issues such as the limits of productivity, an offshoot of the analysis might prove of crucial importance for a better understanding of the origin of individual members of the crowded lexical paradigm of Bulgarian verbs in general and the way they are stored.

1. Preliminary remarks

In Kovatcheva (2012a), a class of unchangeable onomatopoeic words was isolated in an electronic corpus of unannotated spontaneous spoken Bulgarian (SpB), from which all instances of the type of words under study were manually culled. Their specific function was identified as that of ideophones ("marked words that depict sensory imagery", Dingemanse 2011: 23), a category unrecognized so far in

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the Bulgarian linguistic literature and traditionally conflated with interjections. In the previous study the data from naturally recorded conversations was supplemented by an example collection of ideophones from genres not represented in the existing corpora, such as motherese. The category is familiar to linguists working with African, American-Indian and Asian languages but examples are said to be scarce in the languages of Europe (Nuckolls 2004: 132). This class of words is receiving growing recognition, thus making amends for complaints by specialists that relevant studies have been either ridiculed or ignored and that ideophones "occupy a shadowy world of unofficial linguistic inquiry" (*ibid*.).

The present study is a follow-up which tests a hypothesis about constraints on the word-formation of one type of ideophone, using additional experimental techniques. The latter approach is justified by the scarcity of ideophone occurrences in corpora (cf. Gilquin & Gries 2009: 9). In addition, the experiment was expected to offer information on the psycholinguistic problem of whether roots in Bulgarian are stored as allomorphs or as some archform (*ibid*.: 10). The organization of the paper is as follows: the results from the corpus-driven exploration of ideophones (their pragmatic meaning) is described in § 2, laying emphasis on their orality; in §3 the focus is on the typologically unusual 'deverbal' ideophones in Bulgarian. Arguments are given showing the implausibility of the word-formation mechanisms offered in the literature. The scope of the study and the investigative procedures are presented in §4, followed in §5 by the analysis of the data and description of the observed constraints. The theoretical conclusions are summed up in the final paragraph.

The analysis of SpB in Kovatcheva (2012a,b) identified two groups of ideophones – onomatopoeic (OIs) and 'deverbal' (DIs) – whose wide use in SpB supports the idea that they survive in cultures not exclusively dominated by a standard variety of the national language (the latter is usually based on a written norm). Work on 'verboids' by Nikitina (2012) confirms that the class is very much alive in the Slavic and Baltic languages as well.

Arguably, OIs belong to a very ancient layer of expressive vocabulary in Slavic. However, discussion of the word-formation of ideophones does not figure among the rich cross-linguistic data in fundamental works such as Heine & Kuteva (2007) and Štekauer *et al*. (2012). Opinions concerning the appropriateness of using pragmatic material in studying productivity in word-formation are polarized, Zwicky & Pullum (1987) being among the early opponents (see also Dressler & Ládanyi 2000: 103). More recent studies maintain that the coinage

of expressive vocabulary provides meaningful hints (Plag *et al.* 1999, Schröder & Mühleisen 2010). "When we look for evidence of grammatical principles internalized by speakers we must rely primarily on the study of nonce or unlisted forms, since it is these forms whose properties must be generated de novo" (Steriade 1998: 3). As for the mechanism of word-formation of Bulgarian DIs (still considered interjections), the rare comments one can find in Bulgarian sources most often make reference to clipping of a verbal form (Nicolova 2008: 484), probably of the imperfective verb (Rå Hauge 1995: 11). Rå Hauge further suggests that the forms related to verbs may after all be "a kind of infinitive" or "irrealis" (*ibid*.: 12, my translation) rather than interjections. Once it becomes clear, however, that 'deverbal' ideophones are a class of words quite apart from the paradigm of any verb, the problem of their word-formation remains in need of reevaluation (Kovatcheva 2012b). Nikitina (2012), for example, does not distinguish between two groups of Russian 'verboids' in terms of morphological relationships (or in terms of time depth) although her examples present a picture very similar to the situation in Bulgarian, down to etymological kinship of items. It is this group of derived ideophones (in paradigmatic relation with verbs) that makes the whole story intriguing.

Before tackling the problem of what word-formative mechanism stands behind the conventionalized and the potential DIs in Bulgarian, a brief description of the diagnostic features of the prototypical Bulgarian OIs is in order.

2. Setting the scene

My example collection of OIs contains 100 types and I have concentrated on those that can function as unintegrated predicates (often in the environment of what would be arguments of the respective verb, Kovatcheva 2012b: 22), as illustrated in an example from spontaneous spoken Bulgarian:

(1)	a.	*fras!*[1]	*ednata*	*obuvka*	*fras!*	*drugata*	*obuvka*
		bang	one.the	shoe	bang	other.the	shoe

No translation of (1) is offered because it is difficult to translate such a verbless structure which d e p i c t s how, for example, a teenager takes off his shoes, throwing them one by one with a bang. In contrast, the related verb, *frasna* 'hit, bang', d e s c r i b e s the same situation. A peculiarity of Bulgarian ideophones proved to be that,

besides emulating sounds (e.g. 2a), they can represent image schemas (usually PATH, see (2b)) and mimetic schemas (mental simulations in the sense of Zlatev 2005, 2007 and Barsalou 1999; see (2c) and Kovatcheva 2012b). The metonymic link with a sound imitation, or rather with a multimodal simulation, is usually transparent but is not obligatory.[2] For speakers of English a good illustration of the difference between description and depiction is offered by the slang word *badonkadonk*. Paradoxically, it is labelled "onomatopoeic" in Wikipedia but glossed without any reference to sound imitation as 'the voluptuously bouncing, large yet firm buttocks of a woman'. No sound whatsoever is involved in the description of a woman with a big *badonkadonk* but the rhythmic motion of the said body part during walking is incorporated in the sound structure of the word. Mimesis helps understand the expressiveness involved. If the word is used in a sentence such as *And then – badonkadonk – she disappeared in the crowd*, it would be an ideophone in the function of an unintegrated predicate depicting, not describing, MANNER.

The mimetic, MANNER-depicting function of ideophones is illustrated by (2) a. *fras!* 'bang' or 'ripping sound', (2) b. *drus!* 'a sudden vertical movement' and (2) c. *hop!* 'any action involving a sudden change in position of the body or a body part':

(2) a. *i* *polata* *mi* *fraaas!*
and skirt.the my fraaas
'and my skirt (went) rrrrip!'

b. *puf!*[3] *i* *drus!* *na* *dupe*
puf and drus on bottom
'hiss and down (she went) on (her) bottom'

c. *i* *hop!* *pod* *krevata*
and hop under bed.the
'and there! under the bed (she went)'

Syntactically, ideophones are unintegrated and most frequently function as predicates in verbless clauses.[4] The intonation contour is broken so as to allow the acting out of the ideophone. Indeed, interjections can be converted into ideophones, as when *meow* is used to imitate a manner of speaking and placed in the syntactic slot appropriate for a verb in (3). Note that *meow* has no verbal marking whatsoever (otherwise obligatory for the Bulgarian syntactic predicate) but, as in (1), there are arguments corresponding to Direct Object:

(3) *tam* *edno* *madamče* *meow!* *tova* *meow!* *onova*
there one little.madam meow this meow that
'(this) bird there was meowing (her words about) this and that'

In addition to being intonationally distinct and often accompanied by gestures, OIs exhibit other iconic features. Thus, they can either be reduplicated (e.g. *drus-drus!* 'a series of vertical shakes as in riding a horse'), or a vowel/consonant sound may be lengthened, depicting (a) a non-momentary action, e.g. *zâââr(rrr)!* 'the sound of a bell or a traditional ring-tone', and (b) intensity, e.g. *fraaasss!* 'a loud and resounding bang'.

The cognitive basis of ideophones are mimetic schemas that combine information from several perceptual modalities (Zlatev 2005: 23). They are performance tools that "enable others to experience what it is like to perceive the scene depicted" (Dingemanse 2011: 358). Strangely but predictably, Bulgarian OIs – not all of them actually onomatopoeic but more generally phonesthemic – are more often embedded in an utterance beginning with 'I see' rather than 'I hear' (note the present tense as an index of 'here' and 'now'). That is why *look* or the demonstrative *there* are offered as appropriate functional equivalents in (4). It is an example of a so-called 'theatrical' performance[5] in SpB (Wierzbicka 1974: 272) by a pilot describing a past predicament:

(4) *i* *az* *gledam* *gledam* *si* *temperaturata* *na*
and I look.I.PRS look.I.PRS my.REFL temperature.the of
masloto *žžâât!* *strelkata* *vze* *da* *se* *kačva*
oil.the žžâât pointer.the take.it.PST to REFL go.up.it.PRS
'and I look I look at my oil temperature there! (I saw) the pointer started to go up' (Nikolova R07)

Instead of trying to render somehow the idiosyncratic meaning of the Bulgarian utterances, it seems a better idea to draw a parallel with more examples of English usage. The general sentiment is that English lacks proper ideophones and demonstrations in spontaneous speech are usually verbally described by adding *go*, e.g. *it went plop*. However, here are some English examples that come very close to depiction:

(5) a. *Now everybody goes below to take a bath in one big tub with soap all over… Scrub, scrub, scrub.* (Boynton 2010: 2)
b. *the steady drip, drip, drip with which small independently owned shops are disappearing* (http://dictionary.cambridge.org/dictionary/british/drip-drip-drip, accessed 18.04.2014)
c. *Home again, grab paper, tweezers, three-in-one oil, run back, twiddle, twiddle, key drops down, pull paper, there is key.* (Pratchet 2002: 90)

In (5b) the ideophone functions as a noun but it is not so clear what its syntactic function is in (5a). The lack of morphological markers in English is probably the reason why the phenomenon has not attracted the attention of linguists. One lemma is based on a mimetic schema (5a), the other describes PATH (i.e. engaging the visual modality, (5b)). Their rendition by Bulgarian ideophones is unproblematic: *trâk trâk!* for (5a) and *kap kap!* for (5b). In (5c) only *twiddle twiddle* is depiction, directly leading to the result (for the remaining subjectless predicates a subject *you* can be recovered but not for *twiddle twiddle*).

Continuing with Bulgarian OIs, in terms of sound structure those depicting abrupt momentary actions end in the plosives [k], [p], [t], [ts] while those depicting trajectories or beginning-middle-end of actions end in fricative or sonorous sounds [s], [x], [f], [ʃ], [m], [n], [l], [r]. Very few OIs end in a vowel sound. Most OIs are monosyllabic. Importantly, if not MANNER, OIs depict telic actions.

Bulgarian OIs are in paradigmatic relations with full-fledged verbs, which are historically derived from them – the verbs expressing 'hit, break, shut with a bang' *frasna* (perfective) / *frasvam* (momentary, imperfective) / *fraskam* (imperfective) all derive from the OI in (2a); *drusna* (perfective) / *drusam, druskam* (imperfective) / *drusvam* (momentary, imperfective) 'shake' derive from the one in (2b). The morphological relation between ideophone and verb is based on conversion, understood as a mechanism "based on the change of paradigm" (cf. Štekauer *et al.* 2012: 219-20 and the reference to the Russian tradition therein). This example is particularly relevant for the possibility of 'categorical indeterminacy' (*ibid*.: 216, see also Note 8 below).

In the course of the investigation it was observed that the *Bulgarian Etymological Dictionary* (BED) does not offer information on the direction of derivation, e.g. *krjas* (an ideophone, indexed as an interjection) 'shrill sound from bird or human', *krjasâk* (noun) and *krjasvam* / *kresna* / *krešta* / *krjaskam* (verbs) 'shout' are all explained as onomatopoeic only. In Kovatcheva (2012b: 35) it is suggested that the bases for the derivation of secondary ideophones demonstrate categorical indeterminacy (that is, 'deverbal' is a bit of a misnomer). Still,

it makes sense to use the term as a conventional name pointing to the paradigmatic relation between such ideophones and their respective verbs. And yet, if a stored item blocks the formation of a DI (Plag 2003: 65), the depictive mode can be delegated to a form homonymous with the respective substantival form:

(6) *Kak go bili, žestoko. Boj, boj!*
how him beat.PTCP.PL savagely thrash thrash
'The way (they) beat him, savagely. Thrash, thrash!' (Nikolova R04)

Due to the vocalic stem of the verbal root *bija* 'hit, beat', truncation leads to a form which is stored as imperative singular (*bij*). On the other hand, the noun *boj* 'thrashing', used in (6) in the depictive mode as an ideophone, is characterized by vowel alternation. Note that deverbal nouns denote bounded events by definition (Talmy 2000: 50ff) so the semantic content of *boj* is compatible with that of ideophones.

The notion of morphological schema (Plag 2003: 184) or cross-formation (Haspelmath & Sims 2010: 50) captures quite aptly the paradigmatic relations between OIs, nouns and derived verbs – see (7) with concrete phonological material:

(7)

<X-(ък)>		<X>		<X-вам, X-на, X_{RA}, X-кам>
/'krjasək/	↔	/krjas/	↔	/'krjasvam, 'krjasna, kre'ʃtja, 'krjaskam/
N		OI		V
'an instance of X'		'X'		'produce X'

(where X = 'shrill sound', the verbal suffixes mark aspect and RA = root alternation).

It becomes clear that the case of Bulgarian OIs supports the lack of 'inherent directionality' in paradigmatic relations as presented in (7) (cf. Plag 2003: 187). And yet, further morphological correspondences are to be distinguished in the right column. Some verbs are historically attested later and hence considered secondary. The lesser degree of transparency shows that the verb with root alternation is the oldest (known as 'primary'). The related imperfective/perfective verbs are historically later formations, but it is very difficult to identify the base. Besides, the question of the base seems to be irrelevant or inadequate: "The process by which speakers compute the phonological properties of complex expressions engages in principle all members of a given lexical paradigm, or even larger sections of the lexicon, rather than some one unique base form" (Steriade 1998: 1).

Given that the paradigm of related verbs in Bulgarian comprises verbs of different 'ages' (see (8) and Note 6), a morpheme-based syntagmatic explanation meets with the difficulty to explain the "return" to the already changed root of the existing verb. In other words, it remains a mystery how the d e p i c t i o n of a shriek (the ideophone *krjas!*) is related to the d e s c r i p t i o n of a shriek (the "old" verb *kreštya*). On the other hand, a morphological schema, or a set of schemas, captures the synchronic and diachronic feedback and feedforward cycle between the three classes sharing a root in (7). An interesting point is that the fourth verb in (7), *krjaskam*, is most probably closer to the noun than it is to the ideophone, thus linking the left and the right columns. Synchronically, the verb is decomposable on paradigmatic grounds (*krjas-k-am*) but the meaning of the root extension -k- has not received a convincing description. In our case the opposition *krjasvam / krjasna* vs *krjaskam* is one of momentary versus repeated action, which can be predicted if the latter comes from the noun, i.e. 'to produce a series of shrieks'.

3. The unusual 'deverbal ideophones'

The group of DIs extracted from the corpus comprises about three dozen conventional items. It has to be borne in mind that any frequency counts could only reveal the proclivity of a speaker to switch from descriptive to depictive mode in typical situations like talking to infants or 'performing' during narration and thus they say nothing about productivity. The aim of the extensive illustration below is to show that, parallel to the ideophone-verb relation already shown for OIs, there is a one-to-many relation between a DI and related verbal lexemes. Thus, the related verbs can be primary[6] or derived, perfective or imperfective, secondary imperfective, transitive or intransitive/reflexive. It is not clear at all which verb is to be considered the base. Verbal aspect, for one, does not seem relevant as there are other means to mark aspectual meanings, for example reduplication (e.g. depicting iterativity – see the verbs for 'blink' (xiv) and 'run' (xxii) in (8)).

(8)

(i)	*bliz*	b l i ž a / blizvam/ blizna ‚lick'
(ii)	*blâs*	blâsvam/ blâsna/ blâskam (also reflexive + se) 'push'
(iii)	*brâk*	b â r k a m / brâkvam/ brâkna 'insert hand'
(iv)	*guš*	gušvam/ gušna/ guškam (also reflexive + se) 'hug'
(v)	*dras*	d r a š t j a , drasvam/ drasna/ draskam 'draw a line',

(vi) *drâp* d â r p a m / drâpvam/ drâpna (also reflexive + se) 'pull'
(vii) *zavrâz* zavârzvam/ zavârža (also reflexive + se), cf. vârzvam 'tie, tie up'
(viii) *kac* kacam/ kacna 'land (after flying)'
(ix) *klâv* k â l v a / klâvvam/ klâvna 'peck'
(x) *lap* l a p a m / lapvam/ lapna 'devour'
(xi) *lâs* lâsvam/ lâsna/ lâskam 'be/make shiny; become visible', cf. l â š t j a 'be shiny'
(xii) *mig*(*-mig*) m i g a m / migna/ migvam 'blink'
(xiii) *muš* mušvam/ mušna/ muškam (also reflexive + se) 'insert'
(xiv) *otvor* otvaryam/ otvorya 'open'
(xv) *plis* plisvam/ plisna/ pliskam 'throw liquid'
(xvi) *primâk* primâkvam/ primâkna 'draw nearer', cf. m â k n a 'carry'
(xvii) *šmug* šmugvam se/ šmugna se 'quick movement away'
(xviii) *štip* š t i p j a / štipvam/ štipna 'pinch'
(xix) *tič*(*-tič*) tičam/ iztičam 'run', cf. t e k a 'flow'
(xx) *vrât* v â r t j a / vrâtvam/ vrâtna (also reflexive + se) 'turn'
(xxi) *xvâr* x v â r č a / xvrâkvam/ xvrâkna/ xvârkam 'fly'

Examples of suffixed DIs are given separately:[7]

(9)
(i) *kašljuk* k a š l j a m 'cough', cf. kašljukam
(ii) *pâlzuk* p â l z j a / plâzna 'crawl', cf. pâlzukam
(iii) *pârzul* pârzulvam/ pârzulna/ pârzulkam 'slide'; p â r z a l j a m (se) 'slide'
(iv) *târkul* târkulvam/ târkulna (also reflexive + se) 'roll down' cf. t â r k a l j a m 'roll'

Semantically and formally, DIs mirror the behaviour of OIs – they depict MANNER or PATH of telic actions, they are mostly monosyllabic and end in a consonant sound, they can be iconically reduplicated in speech or pronounced with a lengthened sound (*târkuuul!* 'roll', cf. Eng. *weee!*). Just like OIs, reduplication depicts series of telic actions: *bârnik-bârnik!*[8] 'rummage', *tupur-tupur!* 'the sound of a galloping horse', *skok-(pod)skok!* 'hippety-hop', *štip-štip!* 'pinch'.

In at least one case the relation between a very common ideophone, *guš*, and the respective verbs ((iv) in (8)) bears only a superficial similarity with the remaining conventional DIs. However, both the ideophone and the cognate verb are desubstantival, not 'deverbal'. The noun *guša* denotes the soft part of the chin and the meaning of the verb is thus not predictable. It happens to stand for the hugging motion that brings a creature next to your chin as a sign of affection, i.e. 'hug'. The lexicalized holistic meaning is impossible to understand without the underlying mimetic schema and the frequent parallel use of the ideophone. The link with the noun has been totally forgot-

ten because it does not denote the action by itself. The significance of this example has to do with the idea that the categorical nature of the base in word-formation is irrelevant, i.e. it speaks in favour of an output-oriented theory (Plag 2004).

In view of the growing awareness of the different distribution of morphological processes across registers (cf. Plag *et al.* 1999: 221ff), it is crucial to emphasize the exclusively oral performance of ideophones of both types, which tallies with their lack of syntactic integration. One reviewer's fair observation is that truncated forms of verbs in Bulgarian may "have a function that is not found in spoken language". Reference is made to the genre of translated Disney comic books where "(they are used) not only to provide a 'soundtrack' for the series of drawings that make up the story… but also to compensate for the static character of the drawings." To me, this absolutely valid description clearly shows that in comic strips we are dealing with a meta-function of such words, one that is modelled on English where the corresponding lemmas are not used as ideophones. Indeed, most of the Bulgarian translations, suggested as counterexamples by the reviewer, are coinages that are never meant to be said and sound foreign.[9] That is, the truncated forms from this genre cannot be used in spontaneous Bulgarian narratives as d e p i c t i o n s of actions (see § 2 and Note 5); they seem to be just graphic i n d i c e s of actions.

The literature offers precious little on a possible mechanism of word-formation that produced *guš!* or any other DI in Bulgarian. Here are some arguments against describing their word-formation in terms of clipping, fossilized imperative forms or conversion. It cannot be clipping because (a) there is a change in category while clipping is said to be exclusively associated with 'familiarity' (Plag 2003: 121); (b) some ideophones display typical suffixes *-ul, -uk*. DIs look like clipped verbs because they lack markers for person, number, tense and aspect by definition. On the other hand, they preserve prefixes so there can be a lexical opposition. For example, *strâg! – ostrâg!* 'grate' are related to *stârža* (imperfective) and *ostârža* (perfective) respectively, but also to *ostârgvam* (secondary imperfective). Both DIs depict a telic action: 'grate, rub, scrub, scrape' but the form with the perfectivizing prefix *ostrâg!* involves completion too. The alternations of the consonant sound in the verb root and ideophone are the major obstacle to deciding what word-formation pattern is being employed.

Another reason why DIs do not seem to be clippings is that formally they are patterned on their model (that is, the OIs), which may result in a departure from a given verbal base, e.g. by including part of a suffix (see § 5.1.3.). Thus, two-syllable DIs are more likely to fol-

low the rhythmic pattern 'tat**a**'. The mentioned occasional affixation allows some of the deverbal ideophones to conform to this rhythmic pattern since otherwise, after truncation, they would result in unpronounceable monosyllables. The contrast *-uk* / *-ul* (both semantically opaque) seems to repeat the phonesthemic significance of the two consonant sounds mentioned above. That is, the suffix *-uk* appears in ideophones which depict abrupt sounds as in the following: *kašljuk!* 'cough', *pisuk!* 'squeak, squeal', *xâlcuk!* 'hiccup', *kucuk!* '(metonymically) the gait of a lame person' (the last two belong to OIs). In addition, *bleštuk!* 'twinkle', *mâžduk!* 'glimmer' depict interrupted visual stimuli. In contrast, the suffix *-ul*, as in *pârzul!*, *xârzul!* and *târkul!*, depict the ingression of motion of some duration: 'set off sliding' or 'set off rolling' respectively (cf. Eng. *weee!*).

The source of DIs cannot be some fossilized imperative either (cf. the suggested etymology in BED for the entry *boc!* 'poke')[10] because (a) DIs are not verbal forms, they do not trigger agreement in person and number but remain syntactically unintegrated; (b) the very few fossilized (irregular, stored) imperative forms in Bulgarian do not coincide with DIs, neither do they fit semantically (cf. *vlez* 'come in', *drâž* 'hold', *viž* 'look'). As already illustrated, occasional homonymy with an irregular imperative may block the derivation of a DI (cf. Plag 2003: 65) but the functions of the two are miles apart. It is true that ideophones may have instigating force in certain contexts but it ensues from the basic function of 'theatrical' demonstration, as when caregivers use babytalk.[11] Incidentally, the formulaic instigating particle *(x)ajde* 'come on, let's' can be used as an ideophone n o t addressing anybody (as an imperative is meant to do) but depicting an action performed without delay:

(10)	*kupih*	*hljab*	*i*	*ajde!*	*vkâšti*
	bought.I	bread	and	ajde	home
	'I bought (some) bread and straight home'				

If conversion is defined as the mechanism responsible for change of word class without overt marking, except membership in the respective paradigm (Štekauer *et al.* 2012: 219-20), then it seems that DIs may be converted verbs. The rarity of verbs converted into ideophones across languages should be enough to cause suspicion. Besides, due to the already mentioned historical root alternations, which are characteristic of Bulgarian verbs, there are a number of phonotactic constraints in applying truncation. The problem shifts in the direction of choosing that single suitable base from among

the array of related verbs in the lexical paradigm (see (8)). The suggestion to pick the perfective member meets with counterexamples (Kovatcheva 2012b). In addition, in many cases, the perfective and imperfective verbs share exactly the same root so aspect is more likely irrelevant. For all the above reasons, it did not prove a straightforward task to determine the mechanism of word-formation of DIs. The working hypothesis was that analogical back-formation is involved with the complication that the base is categorically indeterminate.

4. Data

In order to test the hypothesis it was necessary to apply it to a larger number of verbs than the 57 DIs described in (Kovatcheva 2012a: 313). Due to the specific usage in spontaneous speech and the limited availability of spoken corpora for Bulgarian, it proved difficult to find more types, all the more so as the class of ideophones would not be tagged as such. Still, the usage itself (beside that of OIs) seems well-entrenched in the speech community, be it only as a cultural "meme" (Dawkins 1989: 368).[12]

The persisting vitality of the truncated pattern was checked through an online search. The colloquial use proved to be much more common than in any existing spoken corpus. Of course, in the absence of face-to-face oral communication, written DIs stand as metasigns for the respective actions – see the depiction of a superstitious Bulgarian ritual in:

(11) *Pljuv pljuv!* *dano* *i* *pak* *pljuv pljuv pljuv!*
spit spit hoping.for.the.best and again spit spit spit

protiv *uroki*
against bad.luck

The lexicalized OI for spitting is *pu!*, so the above is a creative usage based on the verb *pljuja* or *pljuvam* / *pljuna* (see below).

A reasonable experimental procedure in the event seemed to be to design a questionnaire based on verbs from a dictionary and then analyse (a) the elicited forms and (b) the acceptance judgments of informants when provided with a typical verbal context. A corpus of 240 verbs was excerpted from a monolingual Bulgarian dictionary (Radeva 2004). Based on Kovatcheva (2012b), the criteria for selecting verbs was that (a) they denote physical actions with clear underlying

mimetic schemas and (b) ideophones related to them are not conventionalized. The semantic criterion can be illustrated with the attested DI *brâk!* 'inception of inward movement'. The verb *bârkam* has two historically related meanings: (1) 'insert hand, stir' and (2) 'make a mistake'. Only meaning (1) is compatible with the DI *brâk!* (with a typical metathesis).

Among the analysed verbs there are no borrowed items answering the criterion. Another observation is that desubstantival verbs readily form DIs if the lexicalized meaning corresponds to a mimetic schema, e.g. *zavint!* 'screw in' from *zavintvam/ zavintja* (native derivation from the noun *vint* 'screw', which was borrowed from German), *zaključ!* 'lock' (from the noun for *key*) but not **zakril*, cf. *zakriljam* 'protect', derived metaphorically from 'spread a wing over', from Bulg. *krilo* 'wing'. Unfortunately, designing a questionnaire which would optimally elicit responses did not prove an easy task.[13] Therefore, the present paper reports the problem areas and the working hypothesis based on the morphological relationship of the already conventionalized DIs to the respective verbs and those of the potential ones with the excerpted verbs.

5. Analysis

The switch from the default descriptive mode to the depictive one in SpB allows the formation of ideophones on the spur of the moment (a situation reminiscent of Downing's idea of "deictic" word-formation (Downing 1977: 818; see (4) where acting-out by means of the ideophone is also d e s c r i b e d with the appropriate verb, thus creating the context for the ideophone).[14] The most plausible mechanism of word-formation producing new DIs on a 'need' basis is analogy, more specifically back-formation. The definition of back-formation as "the application of a rule in the less productive direction", referring to a given morphological schema (Plag 2003: 187, cf. the reference to Becker therein), describes the case perfectly. Productivity is mainly associated with derivation, so the regular and predictable use of truncation to achieve the effect of primary OIs may be attributed to the above-mentioned switch from description to depiction: the meaning of a DI is both abstracted from and paradigmatically supported by a semantically appropriate verb.

As for storage, consider the notion of 'distributed lexicon' as presented in Wray (2002: 249) and the group of expressive formulae which exhibit "the greatest selectional context dependency" (*ibid.*:

250). Although she does not mention ideophones, the latter are unanimously accepted as expressive words (Dingemanse *forthcoming*). It looks as though expressive vocabulary need not be obligatorily stored, although it usually is. In other words, the switch from descriptive to depictive mode in spontaneous speech may be exactly the "system-external explanation" that Haspelmath & Sims (2010: 53) are writing about. When linguists maintain that there are hardly any ideophones in English, they probably mean that the depictive mode is not a cultural stereotype for native speakers. But see the following from a corpus of spoken Scottish English:

(12) *they just go straight back in, nicotine-stained hands, woo-woo-woo-woo-woo, make up sandwich* (on video: accompanied by patting invisible object in hands; SCOTTISH, Conversation 14)

The whole point about the depictive mode in Bulgarian is that no gesture or integrated syntax is r e q u i r e d . If there was a Bulgarian version of (12), it would express the meaning '(woo-woo-woo) and the sandwich is ready' or '(woo-woo-woo) and there's the sandwich' without that many words.

There are two conditions potentially conducive to the analogical creation of ideophones from notional verbs. First, as mentioned earlier, all OIs have verbal counterparts that are fully lexicalized so that speakers can freely switch from the depictive mode *fras* to the descriptive mode *frasvam*/*frasna* and back. Second, many of the derived onomatopoeic verbs have long lost their link with the depictive mode. Thus, *tupam* 'beat (rugs)' is now exclusively lexicalized as a verb of motion without reference to the noise that the beating produces. Even so, the depiction word to go with 'beat' is still *tup*. This fact supports the impression that, by ridding any notional verb of its perceived markers of grammatical categories, speakers may achieve the effect of OIs as depicting (not describing or referring) words.

From an onomasiological point of view, the resulting word form stands for a bounded action able to evoke rich modal simulations. Such forms can be then iconically lengthened or reduplicated in performance. In other words, the model for analogy is not only the category ideophone with its semantic and formal characteristics but also the fact that the rule of forming verbs from OIs is exceptionless. In this case, then, analogy proves to be a productive pattern, in accordance with the claim that "productive processes should be defined as processes *which in a certain domain give rise to novel forms that are immediately perceived as existing words*". (Löwenadler 2010: 85, high-

lighting in the original). Löwenadler's concern is that a productive rule can produce defective forms. Although the problem is orthogonal to the one discussed here (there cannot be defective ideophones), his conclusion is that, even for inflexional forms, bases are not perceived as tokens by speakers. In effect, this observation repeats the essence of the quotation from Steriade in § 2 above. Steriade's notion of "lexical conservatism" proves helpful in resolving the query about the selection of a base for the formation of DIs in Bulgarian.

As already pointed out, the restrictions arise from the great number of possible bases. The problem areas fit into two broad cases – the allomorphy of Bulgarian verbal stems and the competition between related verbal and substantival bases. The latter were already accepted above as being categorically indeterminate. The multiple possible verbal bases were the variables on which the experiment focused.

Consider the lexical paradigm of verbs expressing the meaning 'shine': *blestja, bljaskam, bljasvam / blesna, problesna / probljasvam, bleštja, bleštukam*. For one, there is the primary imperfective verb *blestja* with a variant *bleštya* which denotes the property of being shiny. An interesting explanation of the multiplicity of bases is that the primary imperfectives are relics of an older typological state of the Bulgarian language, before the grammaticalization of aspect, when actions were lexicalized around the opposition telic/non-telic (Ganeva 2012). Primary imperfectives, representing the oldest lexical layer, are characterized by a number of phonological alternations of the root (here *-št,* see also *kreštja* in (7) and *hvaštam* below). The form *bleštja* is now perceived as dialectal and *blestja* is the reinvented imperfective – a clear example of the tendency towards uniformity of the root in a set of schemas (or 'lexical conservatism'). Other members of the lexical paradigm are the perfective *blesna* with inchoative meaning which is the source of the secondary imperfective *bljasvam*. The aspectual pairs *bljasvam / blesna* and the prefixed *probljasvam / problesna* differ in lexical meaning – inchoative versus momentary. Momentariness plus imperfective aspect results in the expression of iterativity. It is important to recall at this point that the verbs converted from OIs are, in contrast, all decomposable and transparent.

Which form is likely to be chosen to depict the event of light reflection? In the event, the conventional ideophone is *bleštuk* (with the altered base, therefore pretty ancient) so the verb *bleštukam* should be the result of conversion on analogy with all OIs and should not be considered relevant. BED does not offer such fine distinctions. Except *bleštuk*, the forms *bles / bljas* sound acceptable too (if, in order

to save time, speakers happen to resort to back-formation instead of retrieving the stored item, or if the stored *bleštuk* is avoided as stylistically inappropriate because of its association with child language). On the other hand, a semantically similar verb, *lâštja* 'shine' (not considered dialectal despite its "age"), cannot form a DI due to token blocking (Plag 2003: 65), i.e. *bleštuk* with the same meaning. On the other hand, the telic pair from the same paradigm, *lâsvam* / *lâsna* 'make shiny' (transitive) or 'become visible' (intransitive), is readily truncated to *lâs!*. The latter can depict both the transitive and the intransitive actions: the reduplicated *lâs lâs* is appropriate in a context of buffing up one's shoes (mimetic schema) while *lâs* can depict sudden impact on the visual perception (e.g. when the bald head of a person suddenly came into sight).

It becomes clear that just dropping the grammatical suffixes does not necessarily lead to the desired form-meaning entity for a DI. As shown above, prefixes seem to function with their lexical meaning in DIs, while in the verbal system they usually have an aspect-changing function too. Another observation is that DIs preserve the typically verbal accentual pattern which may be dictated by their pragmatic function of predication. For example, the occasionalism *podp**i**s podp**i**s!* 'sign' carries stress (bolded) on the root, as does the verb *podp**i**svam*, while the stress in the related noun is on the prefix: *p**o**dpis* 'signature'. Preservation of the verbal accentual pattern is not possible if the derived word is monosyllabic, as in *vârt**ja*** > *vrât!* (with obligatory metathesis) 'turn'.

The preliminary evidence did not throw light on which form might be the preferred one when the rule for the alternation of the root vowel [ja]/[e] is involved – will speakers opt for *bljas*/*probljas* or *bles*/*probles*? The alternation depends on the phonological environment but there are numerous analogical levellings, all the more as a possible back-formation would delete the appropriate context anyway.

In summary, we are faced with the problem of defining the actual back-formation mechanism in terms of phonotactic transparency. The limited productivity of DIs has to do with the difficulty to select a representative of the lemma due to the historical metamorphoses of the verbal root in Bulgarian. A further twist is that subtraction on the way to DIs fits the term "cross-formation" (Haspelmath & Sims 2010: 50, Plag 2003: 188), i.e. it looks like a rule of decomposition of the base verb. Being morphologically simple, the output, however, imitates the phonotactic structure of existing OIs. Before trying to disentangle the apparent incompatibility between schema and analogy, let us consider some of the more common alternations in the corpus:

- final root consonant: [d/ʒd], [g/ʒ], [ʒ/z], [ʃ/s], [ʃt/zero],
- root vowel: [ja/e], [e/i], [e/a]

At this stage it seems that the sheer phonetic ineffability of potential ideophones accounts for the limitations to what otherwise looks like a productive pattern (see 5.1.1 to 5.1.5).

5.1. Constraints observed

5.1.1. DIs cannot end in [ʒd] – cf. **navežd* –, probably because [d] dominates within the lexical paradigm of cognates (and is historically prior). In addition, due to obligatory devoicing in final position, the resulting [ʃt] cannot be interpreted as a sound alternating with [d], while the alternation [d/ʒd] is well-attested in verbal roots.

5.1.2. DIs cannot end in [ʒ] or [ʃ]. Historically prior are [z] and [s] respectively. The unnaturalness of **maž!* is due, as in the case above, to the fact that the automatic devoicing to [ʃ] is not the expected alternative of [ʒ], so instead *maz!* depicts *maža* 'spread (paint, butter)' with -z- figuring in the related nouns and adjectives as well (*maznina* 'oil, fat', *mazen* 'oily, fat'). Neither does **brâš* as depiction of *bârša* 'wipe' exist. The DI *brâs!* ending in the historical consonant -s of the root is conventionalized as a depiction of a related verb: *brâšna* 'scrape, shave'. Thus *bârša* has no plausible DI in the standard variety despite the strong semantic support of a mimetic schema. This asymmetry can be explained by the backgrounding of the mimetic schema in 'wipe' in favour of the result of wiping, while the same mimetic schema still underlies the meaning 'scrape, shave' (as well as the dialectal *brâskam* 'sweep'). There is no phonotactic constraint on the related "younger" pair *zabârsvam*/*zabârša*, which yields *zabârs* 'wipe' for either verb. It is this prevalence of the historical consonant in DIs that must have led to the conclusion that DIs are derived from imperfective verbs, but the concept of morphological schemas helped to unravel the much more complex situation.

5.1.3. DIs cannot end in a vowel. This constraint applies to poorer lexical paradigms, consisting only of a primary imperfective and a perfective such as *hvaštam*/ *hvana* 'grab'. The difficulty is that *-n(a)* is an aspectual marker and *-št(am)* is a historical assimilation which remains opaque. Although semantically a verb meaning 'grab' is ideal as motivation for a DI, this momentary action is depicted by general iconic ideophones *hop!* or *tak!* and not by a derived DI. Interestingly, the Russian verbs from the same root *hvatat'*/ *hvatit'* (without assim-

ilation in the root) do share a DI: Russian *hvat'* (Nikitina 2012: 169). It is plausible to hold the sound alternation responsible for the ineffability in Bulgarian since the common morph is just *hva-* and it does not seem to be a good enough representative of the lexical meaning. Tests showed that the constraint is not related to any avoidance of final *-št*. The cluster seems to be allowed in other cases – see the occasionalisms *obrâšt!* 'turn', *zagrâšt!* 'wrap'.

Additional evidence for the avoidance of final vowels in DIs comes from forms such as *sâbuv!* and *prozjav!* where -v comes from the aspectual suffix (§ 5.1.4).

5.1.4. Roots ending in [j] are another phonotactically difficult case. There is a conventional DI *mij-mij!* 'wash' but for most verbs whose root ends in [j] the form would coincide with their imperative. Beside *bij* (from *bija* 'beat', see (6)), *prozej* (from *prozeja se* 'yawn') and *pljuj* (from *pljuja* 'spit') are also perceived as imperatives, even in a context of depiction. This obviously blocks the back-formation of possible DIs. That the form with final -j is the expected one, provided that there are no interfering processes, finds support from an attested usage of the verb *duja* 'blow' from the 19th century:

(13) *po-goljamoto* *momče* *kato* *go* *vidjalo* *duj!*
more-big.the boy as him saw.PTCP.SG.N blow
po *dola* *da* *bjaga*
down slope.the to run.he.PRS
'the elder boy, when he saw him, there! down the slope he rushed'

The use of 'blow' here comes from a colloquial meaning 'run, disappear'. In contemporary Bulgarian the ideophone *duj* is considered archaic or dialectal.

It is noteworthy that, in order to avoid homonymic clash, back-formation to occasional DIs from verbal roots ending in [j] results in *prozjav!* 'yawn', *pljuv!* 'spit', *obuv!* 'put shoes on', *sâbuv!* 'take shoes off'. This solution is extraordinary because -v- is part of a decomposable imperfectivizing suffix in the respective verbs. In other words, it looks as though the sources of back-formation in these cases are the imperfective members of the lexical paradigm (*prozjavam se*, *pljuvam*, *obuvam* rather than *prozeja, pljuja, obuja / sâbuja*). However, both *pljuja* and *pljuvam* are imperfective so the decisive condition must be avoiding homonymy with the imperative. In addition, the phonesthemic structure of ideophones, which is mainly associated with

the expression of telicity and boundedness, favours a final consonant sound. The remnant of the imperfectivizing suffix has absolutely no impact on the meaning of the DI, which can still depict either momentary actions or actions in progress (for non-telic verbs). These examples present important support for the claim that back-formation is not 'suffix-deletion' (Plag 2003: 187).

5.1.5. The alternations *e/i* and *e/a* in verbal roots (e.g. *sâbiram/ sâbera* 'collect' and *donasjam / donesa* 'bring') have proved most difficult for Bulgarian speakers to go round. The perfectives in such pairs (the right ones) have their final syllable stressed in the present tense. Part of the problem may be that removing the stressed syllable leads to activation of various other forms. In addition, these are cases with particularly rich allomorphy of the root, e.g. the root vowel of the primary imperfective for *donasjam / donesa* is *-o-* (*nosja* 'carry'), which also appears in the related nouns. Only a statistical survey would be able to outline the profile of preferences for this complicated type of lexical paradigm. As for ?*sâbir* or ?*sâber*, there may be a rare opposition of duration/iterativity for each choice of a DI.

5.1.6. Finally, one more argument in favour of back-formation is that DIs, just like OIs, can be converted into nouns. Examples are the well-known periphrastic prefabs in baby talk. They contain the verb *pravja* 'make' and an ideophone, e.g. *pravja am* 'eat', *pravja nani-nani* 'sleep', *pravja hlâc* 'hiccup' (with OIs), but also *pravja mij-mij* 'wash', *pravja muš* (with DIs). The English periphrasis *go plop* seems different in that the 'theatrical' component of meaning is made explicit by *go* and the onomatopoeic word is part of an extended predicate, not a direct object. Perhaps it would be more appropriate not to ascribe object status to the ideophones in Bulgarian either, thus stressing their categorical indeterminacy. Note that, in the rare cases when they appear in writing, such phrases are often spelt as if they contained quotes: *pravja "am"* 'eat' – an extended predicate. Outside periphrasis, the conversion of interjection to ideophone to noun seems natural enough (cf. (7)). An example in English is the derogatory *woo woo* 'beliefs based on pseudoscientific explanation', linked to the interjection *woo!* as an expression of awe in the context of a magic show (http://en.wiktionary.org/wiki/woo_woo, accessed 18.04.2014). One of the results of the research is then to suggest a framework for reconstructing the connection between onomatopoeic nouns and verbs in Bulgarian (and possibly other languages) based on a morphological schema such as (7).

6. Conclusions

Productivity is usually measured for affixation patterns. However, the formation of Bulgarian DIs – units with a specific pragmatic function – answers several of the productivity properties (Plag 2006: 548ff) despite the claim that analogy is irregular. Thus, DIs are semantically and phonologically transparent; they may not be frequent but if needed, they would predictably be formed by truncation to emulate the structure of the primary OIs (i.e., they need not be stored). The structural restrictions for their word-formation are phonological – phonesthemic, phonotactic and stress-related. After all, "[t]hat such output-oriented restrictions should exist is to be expected in a model in which outputs… have representations in the lexicon on a par with inputs" (Plag 2003: 186). In contrast to the three known kinds of analogy – levelling, extension and creation – the analogy operating within a set of matching morphological schemas can be called t r a n s i t i v e a n a l o g y. In contrast to the symmetrical relations in proportional analogy (a:b = c:?) and back-formation (a↔b) in word-based morphology, the visual representation of this more complex case of 'cross-formation plus analogy' might look as follows:

$a \leftrightarrow b \; / \; b_a \rightarrow a_1$

where the indices show that b_a does not coincide with b but is dependent on a and in this way connects a with a_1.

Most innovative DIs in Bulgarian will probably never lexicalize owing to their restricted usefulness. So long as the relation between OIs and related verbs remains transparent, Bulgarian DIs will analogically replicate not only tokens of OIs but also their type. The case of Bulgarian DIs thus defines potentiality as 'transitive' analogy. In the long run, it seems preferable to answer the question "is there an absolute distinction between rules and pattern-imitation?" (Booij 2007: 37) in the affirmative (i. e. rule application in one part of the schema and pattern imitation in another). Booij draws attention to the different degrees of abstractness of the underlying analogical pattern which in the extreme case may coincide with a schema (Booij 2010). He distinguishes 'stages' (*ibid*.: 105) in a single word-formative process, each dominated by either schema or analogy. The case of Bulgarian DIs speaks in favour not of stages but of a feedback and feed-forward cycle between schemas which constitutes analogy. That is why I prefer to keep the two mechanisms separate with the qualification 'transitive analogy' pointing to the relations between them

(cf. the idea that back-formation is 'licensed' by transparent lexical entries (Blevins 2006: 532) as well as the notion of transitivity contained in the term 'c r o s s -formation', used in modelling affixation). The term 'lexical solidarity', too, captures the fact that analogy goes beyond a static formula (e.g. English *-ee* formations depending on the corresponding *-er* word to achieve semantic contrast (Schröder & Mühleisen 2010: 54)). In the conceptualization of the present paper, *-er* words feed *-ee* words and the latter serve as feedback checking on the rule of *-er* suffixation in return.

Potentiality is not affected by the negative evidence from lexical gaps (Albright 2009, Löwenadler 2010). Lexical gaps in the case under discussion occur if the would-be innovation does not conform to the structure of the target for back-formation (the case of **hva-* above), which is an indication of the double dependence on pattern and schema.

The attempt to capture the mechanism of DI formation in Bulgarian offers evidence on the problem of root allomorphy. An offshoot of the research is the issue of how Bulgarian verbs are stored or represented in the mental lexicon. The majority of cases confirmed the plausibility of word-formation not using a token base but the whole paradigm as base (cf. Steriade 1999: 268). Such an analysis goes against the overwhelmingly syntagmatic approaches to word-formation in the Bulgarian linguistic tradition. A future quantitative processing of evidence provided by informants is expected to show which verbal bases are perceived as most suitable for the onomasiological task at hand. However, the observation that, in case of blocking, substantival roots can also be employed as source of DIs supports a word-formation theory that does not tie processes to bases of a particular syntactic category.

In the absence of morphological markers in the derived DIs, aspects of the semantic coding of actions (±duration, ±iterativity, ±completeness, ±reflexivity) are neutralized. This can be seen in the fact that the discussed back-formation i g n o r e s m o r p h e m i c b o u n d a r i e s (*obuv, pljuv*) or other morphological markers (e.g. *otvooor!* depicting an action simultaneous with the moment of speech with the stem of the perfective *otvorja,* which cannot be used in this function otherwise). This means that, in the long run, the morphological decomposition of the base is less important than the form-meaning unity of the derived word and its pragmatic value (the output, cf. Plag 2004). Some of the above meanings are iconically expressed in the depictive mode by means of lengthening or reduplication in oral performance. The DIs preserve only the listed elements (whether

roots or prefixes associated with mimetic schemas) for PATH and MANNER. It does not seem necessary to coin a special term for this scenario since it shares all diagnostic features of analogy. Instead, the specific feedback and feed-forward relations have been qualified as 'transitive analogy' to accommodate the operation of a rule within the framework of analogy.

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Notes

[1] An exclamation mark will be used to indicate the special intonational properties of ideophones.

[2] The metonymic link between sound and action, associated with this sound, can ultimately be obliterated leading to the emancipation of the bare spatial coordinates of the action, cf. Eng. *pop* and *pop up*.

[3] Note that ideophones are language-specific – while in English *poof* is used to imitate the disappearance into thin air, in Bulgarian it depicts a soft, possibly hissing sound, as in (2b), where it indicates that an inflatable mattress got punctured.

[4] What is the unit of analysis in spontaneous speech is a difficult question to answer, so 'clause' will be used here as a neutral term.

[5] Wierzbicka refers to the 'acting-out' of the message's content, typical of oral performance, as 'theatrical performance'. In Kovatcheva (2012b) I use the term 'actualization' on the grounds that the use of present tense, deictics, gestures, change of voice, direct quotations and ideophones link a spoken narrative to the here and now of communication. Dingemanse uses the term 'depictive mode' for the use of ideophones, which is said to be in stark contrast with the usual 'descriptive' language mode (Dingemanse 2011: 358).

[6] Basic or primary verbs are considered imperfective verbs without any overt aspectual marker (highlighted in (9)).

[7] It is possible that some of the verbs in (9) are actually onomatopoeic in origin or go back to roots denoting PATH (thus not belonging here) but BED does not provide enough information, unfortunately.

[8] The example is one more reason to suspect a very ancient relation between ideophone and verb in Bulgarian, for *bârnik* may be taken as a DI having derived from the verb *bârnikam*, but the latter is itself derived from a primary *bârkam* by addition of a root extension *-nik-*. The problem is that ancient onomatopoeic material was used not only as ideophones but also as nouns and verbs. Some uses still point to an undifferentiated categorical status of elements used in the so-called depictive mode (Kovatcheva 2012b). Synchronically, the Bulgarian verbs for hiccupping and limping, for example, are not transparently onomatopoeic but they must have been – see *xâlcam*, *kucam* and the related conventional ideophones *xlâc*, *kucuk*. Since BED does not provide data, the issue of determining the historical direction of derivation remains open. In other words, the group of OIs must

have been much larger at an earlier point in time (to the chagrin of those who resent the idea of sound symbolism).

[9] Just as OIs can be homonymous with interjections (Kovatcheva 2012a: 195), so DIs may be homonymous with truncated forms with other functions. Translating morphologically simple indexical signs from English with Bulgarian truncated verbal forms in comic strips carries meaning overtones such as the novelty and foreignness of the genre. For example, English *sigh* cannot be considered an ideophone (formally, it can be a noun or an infinitive). When it is translated with a nonce word, e.g. *vâzdâh!* (an example suggested by a reviewer), truncated from *vâzdâhvam*/ *vâzdâhna* 'exhale; sigh', this may be a way to compensate for the lack of an appropriate 'personless' infinitival form in Bulgarian. In any case, depiction (the use of ideophones) presupposes the presence of a n a r r a t o r, which is not the case in comic strips.

[10] *Boc!* is supposed to go with the verb *boda*, *bodkam* so that the final sound [ts] could be explained somehow, but no similar explanation is offered for *mac!* 'dab, smear' (to go with *maža* or as a primary OI depicting the smacking sound of a kiss) and *klâc* 'cut' (to go with *kâlcam*); neither is any explanation offered for *frâc* 'abrupt flirtatious movement of one's bottom', *xlâc* 'hiccup', *prâc* 'fart', with identical final sounds, which are primary OIs and not DIs at all.

[11] For example, by saying *am!* to a baby the caregiver is simulating (and linguistically depicting) eating in order to show the baby what she is expected to do – open and close her mouth rather than 'eat'.

[12] Beside the ubiquitous use of OIs, there is a formulaic pair of DIs that comes from a folk tale about a lazy daughter-in-law who would do nothing all day but lie next to the fire. The only effort she would make is to say *otmâââk! – primâââk!* depicting what the servant does, i.e. he pulls her rug away from the fire and back again if she gets cold (telic actions in progress, marked by the lengthening of the vowel). Note that, in contrast, the imperative of the verbs *otmâkvam* and *primâkvam* employ their perfective form: *otmâkni*, *primâkni* (2SG).

[13] The questionnaire contained acceptability judgment scales for suggested variants as well as elicitation models but informants found it hard to switch to the depictive mode, presumably because it is not employed in writing (except for conventional items).

[14] A proof that we are dealing with a linguistic phenomenon comes from lexical gaps. It is surprising that a salient onomatopoeic verb like that for 'snore', Bulg. *xârkam*, has no corresponding ideophone. The related noun is the result of adding the grammatical suffix for verbal nouns: *xârkane* (i.e. it is not a converted ideophone). An explanation is seen in the fact that in spontaneous spoken Bulgarian the 'theatrical' performance of snoring is likely to be just a smirking sound. There obviously is no onomasiological need for the expression of a predicate 'do something in a snoring manner'.

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