ГЛАГОЛЫ, ОПИСЫВАЮЩИЕ ЗВУКИ НЕОДУШЕВЛЕННЫХ ОБЪЕКТОВ: К ПОСТРОЕНИЮ ТИПОЛОГИИ

VERBS DESCRIBING SOUNDS OF INANIMATE OBJECTS: TOWARDS A TYPOLOGY

Kashkin E. V. (egorkashkin@rambler.ru)
Moscow State University

Reznikova T. I. (tanja.reznikova@gmail.com)
All-Russian Institute for Scientific and Technical Information, Russian Academy of Sciences

Pavlova E. K. (eliz-pavlova@yandex.ru)
Moscow State University

Luchina E. S. (luchina-lena@yandex.ru)
Moscow State University

The article deals, in a typological perspective, with verbs describing sounds of inanimate objects (cf. the noise of a door being opened, of coins in somebody's pocket, of a river, etc.). The analysis is based on the data from four languages (Russian, German, Komi-Zyrjan, Khanty), which were obtained from dictionaries, text corpora and field investigation. We discuss the primary meanings of these verbs and identify the parameters that underlie semantic distinctions between them (type of sound source and its features, type of situation causing the emission of a sound, acoustic properties of sounds). Then we concentrate on the semantic shifts undergone by sound verbs. First, we consider their metonymic changes, focusing on morphological and syntactic processes accompanying these shifts. Second, we analyze metaphoric uses of sound verbs, bringing out typical patterns of their derivation. These results should form the basis for a future large-scale typological investigation of sound verbs.

Key words: lexical typology, semantics, sound verbs, semantic change, metaphor, metonymy

1. Introduction

It is common knowledge in modern linguistics that language facts are better described and explained not in an isolated way, but in a broader typological perspective. This holds also for lexical semantics. When working inside the system of a sole language, one may provide detailed semantic descriptions of every single lexeme, compare items close in meaning, bring out differentiating parameters. The most felicitous example of this strategy is represented by lexicographic projects lead by Ju. D. Apresjan (see NOSS, PAS). Revealing quite subtle semantic features of separate items, this approach is however not aimed at describing the system as a whole — indeed, one can understand the specificity of the way a particular semantic zone is organized in only by comparing it with an analogous zone in other languages. It is such a comparison that shows which features of a system reflect universal cognitive principles, what corresponds to typologically frequent patterns and what to rare ones. Finally, a challenging task is to reveal what systems never occur in languages and what motivates the restrictions.

All these issues are addressed by lexical typology (cf. Rakhilina, Plungian 2007, Koptjevskaja-Tamm 2008, Rakhilina, Reznikova 2011). Within the cross-linguistic approach (like within the intralingual analysis in the tradition of the Moscow semantic school) the object of direct investigation is constituted by separate semantic fields, as every field corresponds to its own fragment of the extralinguistic world and is therefore characterized by a particular set of relevant parameters. At the same time it seems probable that some of these parameters will be found common for a substantial number of semantic fields, it may even turn out that some features will prove universal, being in effect in all the lexical zones. Such generalizations will however be reasonable only when many dozens of heterogeneous semantic domains will be thoroughly described. Nowadays this work is in fact at the very outset — large-scale typological investigations have covered only a few zones for the time being (cf. Viberg 1984 on perception verbs, Newman (ed.) 1998 on verbs of giving, Newman (ed.) 2002 on verbs of sitting, standing, and lying, Maisak, Rakhilina (eds.) 2007 on aqua-motion verbs, Britsyn et al. (eds.) 2009 on pain predicates, Krugljakova 2010 on rotation verbs, Koptjevskaja-Tamm (ed.) forthc. on temperature terms, and several others).

A semantic domain is obviously the more interesting for typology the more opportunities it provides for lexical oppositions. One of such "rich" fields is the zone of sound verbs discussed in the present article. This zone may be further divided into smaller subzones — and here the following theoretical question immediately arises: how should a lexical system be divided into fragments, i. e. which subzones should be treated within a single typological description, and which of them should be studied separately? When searching the solution of this problem, we rely not so much on ontological classification, as on language data, notably, if two semantic domains which may be in theory opposed to each other are regularly united in the same lexemes, we do not separate them, constructing a single typology of them. On the contrary, if the majority of languages lexically differentiate two zones, we treat each of them separately. In accordance with this criterion the zone of sound verbs may be divided into at least three subzones: sounds of human voice (see the article by A. V. Ptentsova in PAS (pp. 619–659) on this group in Russian), sounds of animals (see a typological

overview in Rakhilina 2010), and, finally, sounds of inanimate objects. In this article we will focus on the latter subclass.

Note that the chosen subzone is quite large — thus, our verb list for Russian contains 55 lexemes — and this is not surprising, as sounding of inanimate objects correlates with a considerable number of various situations. Indeed, sounds are emitted not only by mechanisms when functioning, or by natural objects like water in a river, but virtually by any inanimate object affected by a human or by natural force (e. g., tree branches during the wind, a floor under one's feet, a door being opened, keys in the pocket of a walking man, a falling coin, heavy objects when moving, etc.). How is all this variety of sounds distributed among lexemes in different languages, which parameters of a sound situation play a crucial role in this process — these are the main questions to be addressed in typological research.

Our language sample analyzed for the moment comprises four languages: Russian (Indo-European → Slavic), German (Indo-European → Germanic), Komi-Zyrjan (Fenno-Ugric → Permic; Izhma dialect of the village of Muzhi), Khanty (Fenno-Ugric → Ob-Ugric; the dialect of the village of Tegi, intermediate between the dialects of Shuryshkary and Kazym). The sample will be enlarged at the next stages of the investigation, however the data collected so far do enable us to outline some crucial points regarding the typology of sound verbs and the perspectives for its development.

It should be pointed out that Russian sound verbs have already become the subject of several investigations (see Stojnova 2008 and references therein, as well as Paducheva 2004 and some lexicographic articles from NOSS). Our analysis of Russian data relies on both those papers and our own data acquired from the Russian National Corpus. The German data has been retrieved from dictionaries (Duden, DWDS, Wortschatz Leipzig) and text corpora (DWDS, COSMAS II), as well as obtained from native speakers. The data of Khanty and Komi-Zyrjan has been gained during their complex field investigation.

The structure of our paper is as follows. In Section 2 we discuss the primary meanings of sound verbs and the semantic parameters that underlie lexical oppositions within the field. Next sections deal with secondary meanings and the mechanisms of their development: first, we analyze metonymic (Section 3), and then metaphoric shifts (Section 4). Finally, in Section 5 we draw conclusions.

2. Sounds of inanimate objects: lexical oppositions within the field

When dividing the integral domain of sounds into three subzones, we have already hinted that the classification of sound verbs is largely dependent on the type of sound source (cf. human, animal, or inanimate). It is reasonable to assume that sound source is also involved into further lexical differentiations, i. e. within the domain of inanimate sounds.

Whereas the type of source is a common parameter for all the sound verbs, there is one more parameter specific for sounds of inanimate objects. As has already been mentioned, inanimate objects (as distinct from people and animals) typically emit sounds not on their own account, but being affected by human or natural force.

It is the type of such an action (i. e. a situation leading to sound emission) that forms the second parameter lexically differentiating "inanimate" sounds.

These two parameters — the type of a source and the type of an action — on the one hand, characterize a sound situation on completely different grounds, but, on the other hand, are not fully independent, because different objects are prototypically affected in a different way. Moreover, some sound situations do not correlate with the idea of an external action at all: those are natural sounds (cf. thunder, murmur of a stream, etc.). The specific character of these sound situations also becomes apparent in their lexicalization: many natural sounds are conceptualized by separate lexemes (cf. Russian *žurčat'* and German *plätschern*, which both denote nothing but the sound of water flowing in a stream, or Komi-Zyrjan *gymoony* describing only thunder). This might give an idea that, in accordance with the criterion discussed in Part 1, natural objects should be separated from artifacts and studied as a distinct semantic domain. In most cases, however, languages do not oppose natural sounds to those of artifacts, due to the fact that many of them turn out to be perceived as very similar. For example, the sound of dry leaves under one's feet or during a slight wind tends to be described by the same verb as the sound of papers sorted out by a person (cf. Russian *šelestet'*, German *rauschen*), and flowing water in Komi-Zyrjan, contrary to such verbs in Russian in German, 'sounds' in the same manner as an engine or a tractor (*žurgyny*). As a consequence of this, we consider both natural and artifact sounds within a single typological description (but at the same time we obviously reserve separate nodes for thunder or flowing water in our classification of sound types)[1].

Leaving apart sounds related to natural phenomena as a particular type of sound situations, let us now focus on the core part of the semantic field concerned — objects producing sounds as a result of an external action over them. We go on to consider how our parameters — the type of a sounding object and the type of an action over it — are reflected in the lexicalization of sound situations.

To begin with the type of a source, note, that the classification of sources for the other subzones of sound verbs is quite obvious. Thus, it is enough to go over various species of animals in order to check which of them are described by special sound verbs. For inanimate objects the categorization is much less obvious. It is difficult to imagine using a separate verb for every single object, so there must be some distinctive semantic features that determine "the manner" they produce sounds. According to our data, the most relevant properties of an object are the **material** and the **size / weight** of an object.

There are several kinds of material relevant for the type of sound, and their sounds are lexicalized in all the languages in our sample: metal (cf. Russian *ljazgat'* 'clank', *skrežetat'* 'grind, gnash'; Khanty *s'ărɨtɨ* 'squeak — about a rusty doorlock or an iron hinge'), glass (cf. German *klirren* or Komi-Zyrjan ideophonic verbs with the

[1] There is still a semantic class among the sounds of inanimate objects which is lexically opposed to the other sound verbs and therefore might be the object of a separate typological investigation — we mean the sounds of musical instruments. For them, the emission of a sound is not a side effect of an action over them (cf. squeak of a door or noise of furniture being moved), but their main function. That is why languages often use special lexical units for this type of a sound. Interestingly, languages seem to most notably elaborate sounds of bad and unpleasant playing, cf. Russian *pilikat'* (about strings), *brenčat'* (about piano or guitar); German *quitschen* (about strings), *klimpern* (about piano).

root *z'il'*-), and wood (cf. German *knarren*, Khanty *šɨxartɨ* 'creak'). Along with their prototypical objects, these verbs may cover some "external" frames, and languages show a great diversity in those peripheral zones. Thus, in Russian sounds of teeth tend to be categorized in the same way as sounds of metallic objects (cf. *ljazgat'*, *skrežetat'*), although in some situations a more "wooden" verb *skripet'* is also possible. In Khanty, however, teeth may produce only a "wooden" sound (*šɨxartɨ*)[2].

Besides material, important features of a sound source are its size and weight: some verbs may 'specialize' either in small and light (cf. German *klimpern* describing collisions of small stones, coins, keys, etc.) or in big and heavy (cf. Russian *gromyhat'* about the strokes of heavy chains, tram, furniture) objects.

The size of an object may turn out to be more relevant than its material. Thus, small metallic objects (keys, coins), judging by the languages from our sample, sound rather like glass than like metal (cf. Russian *zvenet'*, Komi-Zyrjan ideophonic verbs with the root *z'il'*-, both refer to collisions of glass and small metallic objects).

The physical parameters of a sound source are further overlapped by the second parameter — the type of the situation which causes an object to produce a sound. We may mark out **falling down** and different types of **deformation** among the most typical situations leading to the emission of sound. Thus, a sound associated only with falling down is described by a German verb *plumpsen* or Komi-Zyrjan *butkys'ny* meaning 'to fall with noise'. An example in which loud deformation is lexicalized is the Komi-Zyrjan ideophonic verb *čažvartny* 'to tear a flat object with noise' (cf. the neutral *kos'oony* 'to tear a flat object'). A subtype of deformation is chewing / gnawing an object, which may also be relevant for sound verbs. For example, a Khanty verb *mŭrnăλtɨ* means 'to crunch sth. (e. g., dried crust)', cf. neutral *pŏrtɨ* 'to gnaw sth.' not implying emission of a sound. Similarly, a Komi-Zyrjan verb *rusjyny* describes a cow or a horse chewing fodder noisily (cf. neutral *n'ačkyny* 'to chew').

The sound classification according to the types of sources and causing situations allows us, on the one hand, to see what can be lexically distinguished within the class of sound verbs, and on the other, to account for what can be lexically merged into one lexical unit. Thus, in Russian both a chair and a door may *skripet'* 'creak', because they (or parts thereof) are made of wood. In German, quite different objects (cf. apples, a bag, a person) may *plumpsen* as long as the noise they produce is associated with falling. However, there are still other combinations of sound types, which are described by a single lexeme, but whose merger cannot be explained by the parameters presented so far. Cf. the above-mentioned Komi-Zyrjan verb *žurgyny* describing sounds of both a stream and a tractor; or Khanty *šŭl'itɨ*, which denotes, on the one hand, rustling of tree leaves, paper, etc., and, on the other hand, the sound accompanying collisions of small objects (coins, fragments of broken glass, bunch of keys, etc.); or again Khanty *lŏtɨtɨ*, which is the basic verb for discrete crackling (e. g., that of dry wood in the fire), and at the same time describes the sound of frequent collisions (e. g., when a seagull flaps its wings). The analysis of such cases (including but not limited to those enumerated here) leads us to the idea of one more parameter that is relevant to sound

[2] As regards collisions of teeth in Khanty, they are denoted by the verbs *seŋktɨ* 'to knock, to beat' and *taritɨ* 'tremble', which are rather verbs of physical action or state than verbs of sound.

conceptualization, namely its acoustic properties formulated in terms of its continuity and regularity. With respect to this, most sounds of inanimate objects may be located on a sort of **continuum**: continuous regular monotonous sounds (e. g., drone of a plane making a landing) — continuous irregular sounds (e. g., rustling of tree leaves) — continuous discrete sounds (e. g., crackle of dry wood) — regular discrete sounds (e. g., clatter of heels) — instantaneous sounds (e. g., a sound of sth. falling down). Our material demonstrates that verbs of sound in all the languages concerned cover an uninterrupted zone on this continuum (as for the examples above, those are continuous irregular sounds for Komi-Zyrjan *žurgyny*, continuous irregular & discrete irregular frequent sounds for Khanty *šŭl'iti*, irregular discrete & regular discrete frequent sounds for Khanty *lŏtiti*). The acoustic properties by no means cancel the oppositions regarding the types of a source and of a situation in general, but they impose some additional restrictions on the 'area', in which those oppositions are applied.

3. Metonymic shifts

The extralinguistic connection between sounds of inanimate objects and situations causing their emission determines one more (purely linguistic) feature of the verbs in question: they often develop metonymic meanings, and this tendency seems to represent a linguistic universal. Indeed, if the process of emitting a sound is contiguous to a physical action (for example, a door is squeaking when it is opening, and wheels are knocking when the transport is in movement), then sound verbs may easily shift to those contiguous semantic classes, denoting a physical situation that is accompanied by a sound. This new meaning is thus metonymically related to the source one.

Such proneness to metonymy makes the domain of verbs referring to the sounds of inanimate objects a fertile ground for studying the techniques of a metonymic shift. Note that the theory of metonymy have concentrated to a greater extent on regular patterns of such shifts, but not on their linguistic mechanism (see however Paducheva 2004). Our task here is to show what linguistic means are applied by languages from our sample for expressing metonymic meanings.

The first and the more obvious strategy is the addition of an argument to a construction (see Paducheva 2004, Stojnova 2008 for details about Russian). Compare examples (1a-b)

(1) a. *Bumaga*$_{nom}$ ***šuršit*** — The paper is rustling.
b. *Mal'čik*$_{nom}$ ***šuršit*** *bumagoj*$_{instr}$ — The boy is rustling the paper.

Example (1a) contains an intransitive clause describing a sound. As regards example (1b), it gets an agentive participant (*mal'čik* 'the boy') marked with nominative, whereas the NP denoting the source of a sound changes its syntactic function and takes an instrumental affix.

Another example related to this group is (2a-b) from German:

(2) a. Als er fiel, hat es wirklich **geplumpst** — When he fell down, there was some noise.
b. Der Sack **plumpste** auf den Boden — The bag fell on the floor with noise.

The verb *plumpsen* initially denotes the sounds accompanying situations of falling (cf. 2a). In (2b) it is however used in a construction typical of a verb of falling (and, broader, of a verb of movement), which includes its combining with a locative (directional) argument *auf den Boden* 'onto the floor'.

An additional possibility to the syntactic alternations that has just been mentioned consists in the changes in morphological markers, depending on the type of construction where a verb is included. This is a frequent case for Komi-Zyrjan, where most of the verbs denoting sounds are derived from ideophones and take different affixes of aspect and actancy derivation in different constructions. For example, an ideophonic root *rač- (račk-, račča-)* refers to a sound (cracking, crunching) which accompanies breaking a wooden object or thin ice. This root forms a base for such verbs as *račk'-ed-ny* (crack-tr-inf) 'to break sth. with cracking, crunching', *račk'-ed-l-yny* (crack-tr-iter-inf) 'to break sth. with cracking, crunching several times', *račk'-ed-č-yny* (crack-tr-detr-inf) 'to crack, crunch' (denotes a single action, which is typical of the combination of a transitive affix and an intransitive one in Komi-Zyrjan verbal morphology), *raččakyyny* 'to crack, crunch' (intransitive; *kyyny* is a grammaticalized verb 'to hear, to be audible'), *račvartny* 'to break sth. with cracking, crunching in a very intensive manner' (where *vartny* is a grammaticalized verb 'to beat' which typically conveys the idea of intensiveness in such patterns, which are not limited to verbs of sound and also include, for instance, verbs of physical action). It should be pointed out, however, that such morphological changes are not restricted to "ideophone-based" systems like that of Komi-Zyrjan. Thus, in the case of Russian *hrust'et'* 'to crunch' the metonymic shift to the domain of punctual action is marked by a semelfactive suffix *-nu-* (3a-b), cf. also a similar pair *tr'eščat'* — *tr'es**nu**t'* 'to crack' where the semelfactive verb doesn't seem to denote a sound any longer and is limited to the domain of punctual deformation.

(3) a. *Vetki hrusteli pod ego nogami* — The twigs were crunching under his feet.
b. *Vetka hrust**nu**la* — The twig crunched.

Languages that use analytic forms (like German in our sample) appear to express constructional changes by choosing different auxiliaries, like in (4a-b).

(4) a. *Der Boden **hat** unter seinen Füßen geknackt* — The floor has cracked under his feet.
b. *Die Fensterscheibe **ist** geknackt* — The window glass broke (lit. 'is cracked').

In (4a) the verb *knacken* refers to a sound, and it is conjugated with the auxiliary *haben*, which is used for most German verbs. In (4b), however, the same verb stands with *sein* which is in particular taken by the verbs denoting the change of a state. This clearly shows that *knacken* in (4b) does not refer to a sound, but to a change of state, i. e. the destruction of the window.

4. Metaphoric shifts

The task of a typological research into metaphors is quite challenging, as the process of their development is creative, and consequently it may seem difficult to impose restrictions on it, and also to distinguish in all cases between a stable metaphor and an occasional one. This task is however undertaken in lexical typology (cf. Rakhilina 2007 on the verbs of aqua-motion, Britsyn et al. (eds.) 2009 on the expressions of pain, Krugljakova 2010 on the verbs of rotation, Rakhilina 2010 on the verbs of animal sounds, see also Zaliznjak 2009), because it turns out possible to identify typologically consistent metaphors and to explain the semantic motivation for their emergence, therefore enlarging the empirical basis of the theory dealing with semantic shifts.

As far as metaphors developed by verbs of sound are concerned, we propose to classify them into two basic types, dependent on the part of meaning which triggers the semantic shift. The metaphors of the first type (we call them 'acoustic metaphors') are based on physical parameters of a sound, whereas the metaphors of the second type ('non-acoustic metaphors') come from other parameters of a situation.

Acoustic metaphors often occur in expressions dealing with the properties of smb's voice or speech. Thus, a verb *gremet'* originally means in Russian 'to thunder' or 'to clatter, clank' and develops a metaphor 'to thunder, roar' (about smb speaking loudly), coming from the idea of loudness. Another interesting pattern is a metaphorical shift of verbs describing very frequent sounds to the domain of fast speech: for example, such as the case of a Russian *treščat'* 'to crack, crackle' and of a Komi-Zyrjan *tark'edčyny* 'to knock, chatter in a frequent manner' (e. g. when one is knocking at the door, or when one's teeth are chattering because of frost) which both develop the meaning 'speak quickly'. Besides, many acoustic metaphors belong to the target domain of unpleasant physical sensations (see also the typological overview of such a shift in Britsyn et al. (eds.) 2009), cf. the Russian verb *gudet'* which denotes the monotonous sound of wind or of a plane making a landing and is metaphorically used for an unpleasant sensation in one's legs when one is tired, or for a headache. Another example of this kind is represented by the German verb *dröhnen* which primarily denotes the dinging of a bell or the noise of a window during a storm, and metaphorically describes a headache.

As regards non-acoustic metaphors, they are not motivated by a sound itself, but by a situation that leads to sound emission (cf. Part 3). Examples of this kind are widespread in Komi-Zyrjan, which develops a rich system of verbs denoting an action and at the same time the sound accompanying it. Thus, for instance, a verb *br'ingys'ny* 'to fall with noise' (about a small metallic object; cf. the neutral *us'ny* 'to fall') is used figuratively in the meaning 'to fall (about a drunk person)', therefore maintaining the non-acoustic idea of falling. Similarly, a word *č'ažvartny* 'to tear a flat object with noise' (cf. the neutral *kos'oony* 'to tear a flat object') is metaphorically applied to a person who is making abrupt movements when playing the accordion (so to speak, tearing it, which is the motivation for this metaphor). Another example in this group is Russian *treščat'* 'to crack, crackle': one of its metaphors is 'to have a headache' (the semantic extension is based here on the idea of destruction, as the sound denoted by *treščat'* typically accompanies breaking an object).

5. Conclusion

In our article we have focused on one subzone within a larger domain of sound verbs, namely on sounds of inanimate objects. Their special nature stems from a basic feature of their sources: inanimate objects do not usually produce sounds on their own account, they "sound" only as a result of an external action, i.e. of the situation they are involved in. This extralinguistic fact determines many different linguistic properties of these verbs.

Firstly, the way of describing a sound depends on what happens with the source object, i.e. the type of a situation forms one of the parameters organizing the structure of lexical oppositions within the domain. Secondly, the contiguity between sounds and physical actions favours the development of metonymic uses, and typological data make it possible to trace the mechanism of these shifts. In particular, it is significant from the point of view of the semantic theory that a metonymic shift may be encoded not only in syntax (by a change in argument structure), but also in morphology (by means of word-building). Thirdly, the contiguity with physical actions expands the range of metaphoric shifts: metaphors may develop on the basis not only of a sound meaning proper, but also of situations causing the emission of these sounds. Thus, a detailed investigation of verbs denoting sounds of inanimate objects may contribute to the analysis of quite a few adjacent domains — verbs of cutting & breaking, falling down, etc.

Generally speaking, a typological investigation of any new semantic field should start, so to speak, from scratch — a new fragment of the extralinguistic reality involves new parameters of lexical variation. At the same time the methodology of revealing the points where lexical oppositions are potentially possible is already clear: it is necessary to understand what semantic valencies are typical of the domain concerned, and to check what types of participants filling in these valencies may be described with different lexemes. By combining different participants we set typical simple situations — frames (cf. for our domain: the sound of a floor somebody is walking on; the sound of tree leaves during the wind; the sound of a glass breaking down, etc.) Such frames are, on the one hand, easy to use as entries for a typological questionnaire, which will be applied in studying a broader language sample. On the other hand, in the future, frames could form the basis for multilingual dictionaries of a completely new type.

As is well-known for anyone who has ever used a dictionary, a word often has several translations, and it is usually difficult to understand the difference in their use from dictionary examples. If a dictionary were based on typical simple situations, and the list of these situations covered all the cases of lexical oppositions within a substantial language sample, the search of interlanguage correspondences would not take a lot of effort. This approach seems to have considerable potential of putting lexical typology into lexicographic theory and practice.

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