Abstract. “Onomatopoeic formations are never organic elements of a linguistic system,” appears in Saussure’s *General linguistics*, “besides, their number is much smaller than is generally supposed”, he adds (Saussure 1959, 69). Consequently, these linguistic elements have been neglected ever since then in linguistic studies. In my paper, I would like to show that these elements can lead us to detecting basic linguistic phenomena that have not been studied yet, and to present an approach to a linguistic system that does not exclude onomatopoeic formations, but is based on them.

The starting point of my research was the large number of Hungarian verbs with an expressive sonority and meaning. In the case of the onomatopoeic verbs we can see a similarity between meaning and form, but not in the case of other verbs whose sound form is expressive and motivated, but the motivation can only be perceived in the light of other verbs with similar sound form and meaning. Since the beginning of the 20th century, Hungarian grammars have referred to these two groups of verbs as differing, but related to each other. However, the relation between sound form and meaning in the two cases differs, and their place in the grammatical system is still unsettled.

It is mainly these verbs that are impossible to fit into the traditional morphologies of language, though not only. If we take on a different approach then the traditional one, we can see that the grammar systems prevailing, are by far not the only ones that seem suitable. I will present correlations between elements of the verb structure like the number of syllables, word-ending, sound structure and word meaning, based on a study of Hungarian verbs. These principles only fit into another kind of morphology than the traditional ones, similarly to the verbs that they are based upon.

Key words: sound symbolism; sound schema; meaning patterns; intensity; number of syllables.

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INTRODUCTION

My experience is that people seem to be fond of sound symbolic linguistic expressions, they feel that these elements give some extra life to utterances. Science, i.e. linguistics however, for a very long time said that there are so very few sound symbolic elements in natural languages, they should not even be considered in grammars or semantics. So, there is an interesting phenomenon here: this attachment to these linguistic elements, that are, supposedly, very few in natural languages. In this paper, I will show that there is not so few of them, and that the difference between sound symbolic and non-sound symbolic linguistic elements is not so big.

Though the phenomenon of sound symbolism has never been in the spotlight of linguistic concern, there has been done research into the sound structure and semantic structure of these linguistic elements. Here I will mainly relate to some interdisciplinary research results. I believe sound symbolism is of great relevance in the study of both language and the human mind. Moreover, it is obvious that this linguistic phenomenon requires a different approach than the traditional morphologies can provide. The impossibility of inset of sound symbolic linguistic units into the traditional morphologies shows this.

HYPOTHESIS

My claim is that a semantic analysis of sound symbolic verbs will show correspondences between sound form and meaning, which in its turn suggests that sound form and meaning of linguistic elements is motivated by a larger number of components than it is usually considered. I will present evidence that verb meaning is bound by sound form, while in the same time sound form is bound by meaning. That is, sound form also conveys meaning, and some kinds of meanings are primarily associated to a certain sound form. Moreover, the analysis shows semantic and grammatical correspondences based on phenomena that have not yet been considered so, like meaning patterns, sound structure, number of syllables, and semantic components like intensity, activity, or symbolism. In my view, sound symbolic verbs constitute a path to a different lexical grammar than traditional grammars do.

1 Here, by symbolism I refer to the semantic component that sound symbolic words have, but words not considered to be sound symbolic do not. This semantic component is rather felt or known, and very hard to express in words.
The starting point and the grounding of my demonstration, is constituted by Hungarian sound symbolic verbs. It should be noted right in the beginning, that sound symbolism is a scalar feature. So, there will be verbs that are considered sound symbolic by most Hungarian speakers, but also verbs that are only considered to be so by a few speakers.

SOUND SYMBOLISM

The term sound symbolism refers to a number of somewhat differing, though strongly related phenomena. In this paper, it will be used in the sense that (Hinton, Nichols, & Ohala 1994) use the term synesthetic sound symbolism, that is “the acoustic symbolization of non-acoustic phenomena” (Hinton, Nichols, & Ohala 1994, 4–5), or the sense (Dingemanse et al., 2016) use the term ideophone, that is “words that combine arbitrariness with iconicity,” or “vivid sensory words” as they put it (Dingemanse et al. 2016, e117). In other words, sound symbolic words are motivated linguistic units (i.e. conventionalized and iconic, but non-arbitrary), whose sound structure expresses mood, sensory experience, or attitude. It is important to note that we said these are expressed by the sound structure of the verbs. The event or activity expressed by a sound symbolic verb does not necessarily have itself a mood or attitude. Sound symbolism only has linguistic existence, and is part of the verb’s meaning. Verbs with different meanings can express the same mood, sensory experience, or attitude; and if they do their sound form is very similar. The sound structure of these verbs is motivated, by which I mean that there is some restriction to (1) the form and (2) the meaning it can have, so neither its sound structure, nor its meaning structure are not incidental/random. Henceforth, I will present several correspondences concerning these morphological and semantic features.

RESULTS AND DISCUSSION

In the following part of the paper I will present groups of verbs that were selected to belong to the same group by their sound structure. That is, the

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2 See Szilágyi 2012: A hangulatfestő igék olyan “motivált nyelvi jelek, amelyeknek a hangulatja érezhetően kifejez valamilyen hangulatot” (7th lecture in Semiotics).

ones that have the same type of syllables in the same order were put in the same group. The sound structures presented are the following:

1. CVC, CVCCVC
2. CVCCVC, VCCVC
3. VCVCVC, CVCCVCVC
4. CVCC, VCC

I will use the term sound schema to refer to a set of sound features:
1. number of syllables, (2) type of syllables, and (3) word-ending.

**CVCOG, CVCCOG SOUND STRUCTURE**

(1) csacsog, csácsog, cseveg, csipog, dadog, dödög, dörmög, fecseg, fröcsög, gágog, gagyog, gügyög, habog, hápog, hrsog, hebeg, heteg, hümög, károg, kotyog, leppeg, locsog, lotyog, makog, mammog, mekeg, motyog, nyafog, nyökög, pampog, petyeg, pőfög, pöntyög, pötyög, psmog, rekeg, seppeg, sipeg, sunnyog, susog, suttog, szepög, vakog, vartyog

Each of the verbs in (1) expresses some kind of speaking, but not a normal way of speaking. Most of them refer to a talk that is impossible to understand because of the manner of speaking (dörmög, dünnög, gagyog, gügyög, hebeg, makog, mammog, motyog etc.), others express either that someone doesn’t like the manner or the content of the talk (vakog, vartyog), either the talk is meaningless (csacsog, csácsog, fecseg, fröcsög, locsog). Also, strongly connected to the attitude, mood or atmosphere expressed in these verbs, there is some expressivity evoked by the sound form of the verbs. Using any of these verbs means not staying neutral to what is being said or to the speaker.

This expressive nuance can be considered a separate semantic component of the verb, although in some cases it seems hard to separate from other semantic components. In this paper, it will be taken as a separate semantic component due to the fact that it can be detected intuitively; native speakers are able to tell whether a verb has any expressive meaning or not (according to their judgement), and to circumscribe it using other verbs neutral concerning their expressivity.

The semantic components and sound features that are all common in the
above verbs are the following:

- manner (of speaking) (not a normal way of speaking)
- expressivity/symbolism
- sound schema (2 syllables + -og/-eg/-ög ending)
- duration of the event (continuous)
- intensity (low)

So, we can see that there are many ways in Hungarian to express in a verbal category that someone is not speaking comprehensibly, and most of these are also highly expressive, expressivity being conveyed by the sound form of the verbs. Moreover, the sound form and the meaning of these verbs are very similar. This suggests that there is a correlation between the sound forms $CVCOG$, $CVCCOG$ and the meaning ‘not speaking in a normal way’. It is important to note that number of syllables and word-ending are the common elements in the sound form of these verbs; other elements (sounds) may differ.

Other linguistic researches also point toward the governing role of syllable number and sound structure. Janis B. Nuckolls (2010) for example shows that the number of syllables, the diversity of sound segments and the type of sound segments are related to ‘aliveness’ in Quichua spoken by Runa when speaking about elements of non-human life. Runa use sound symbolic words to attribute aliveness to elements of the environment.

$CVCCAN$, $VCCAN^6$ SOUND STRUCTURE

Based on verbs with similar sound structure and similar meaning, (Szilág-yi 2013) sets up the foundations of an analogical grammar. Instead of talking about roots and derivational morphemes, we will be talking about schemas constituted by a word-ending and a given syllable number. We can see in the examples below in A), B) and C) that when we want to “derivate” a word into this verbal form, we start saying the word, and just end saying it when the sound schema has been completed. There are verbal roots that never appear without a sound schema (or in terms of traditional grammar: without derivational morphemes). These are called passive roots in the traditional Hungarian morphologies; i.e. roots that never appear by themselves, only with derivational morphemes; the derivational morphemes can vary, so there are at least two derivational morphemes that can be added to a passive root. An example is the passive root $patt$- which does not exist in this form, but

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$^6$ Accordingly to the vowel harmony this sound schema can have $CVCCEN$ and $CVCCON$ forms.
HAJNALKA DIMÉNY

has several derivational forms: *pattan* ‘snap; to move into a position with a quick, horizontal movement, silently, or producing a short noise’; *pattog* ‘pop; to move around by making quick, horizontal movement continuously for a while, silently, or producing short noises’; *pattant* ‘snap; to cause something heavy to make a quick, horizontal movement, silently, or producing a short noise’; *pattint* ‘snap; to cause something easy and easily to make a quick, horizontal movement, silently, or producing a short noise’.

The meaning of the verbs differs a bit accordingly to the word-ending. Moreover and more importantly, we can bring a number of other examples for each verb form, so that each of them fits into a category of verbs with the same sound schema. You can see a great number of examples for sound schema CVCCAN marked with number (2) below, and a few examples for CVCCOG/CVCOG, CVCCINT, CVCCANT/CVCCENT here: *csattog*, *kattog*, *kocog*, *pattog*, *pottyog*, *röpköd* etc.; *csettint*, *kattint*, *koccint*, *pattint*, *pottyint*, *röppint* etc.; *csattant*, *kattant*, *koccant*, *pattant*, *pottyant*, *röppent* etc.

(2) *biccen*, *billen*, *böffen*, *buggyan*, *bukkan*, *csappan*, *csattan*, *cseppen*, *csetten*, *csillan*, *csobban*, *csökken*, *csörren*, *csosszan*, *csurran*, *csusszan*, *cuppan*, *dobbann*, *döbben*, *döccen*, *dörren*, *dübben*, *durran*, *feccsen*, *fröccsen*, *harsan*, *heppen*, *horkan*, *huppan*, *illan*, *kattan*, *kettyen*, *koccan*, *koppan*, *kottyan*, *lebben*, *libben*, *lobban*, *loccsan*, *lottyant*, *löttyen*, *mokcan*, *mukkan*, *nyekken*, *nyikkan*, *nyisszan*, *pattan*, *perccen*, *pisszen*, *pottyan*, *prüsszen*, *puffan*, *pukkan*, *rebben*, *reccesen*, *retten*, *rezen*, *rikkant*, *robban*, *röffen*, *roggyan*, *rokkan*, *roppan*, *röppen*, *rosszan*, *ruccan*, *sercenn*, *serken*, *sikkant*, *surran*, *suttyan*, *szisszen*, *szökkenn*, *szottyan*, *szusszan*, *tappant*, *torpan*, *tottyan*, *tüszen*, *viggyan*, *villant*, *zizzzen*, *zökkenn*, *zörren*, *zöttyen*, *zuppan*

These verbs enumerated in (2) express different kinds of events. Most of them express movement (*biccen*, *bukkan*, *huppan*, *moccan* etc.) or movement with some auditory property (*buggyan*, *csusszan*, *lottyant*, *zöttyen* etc.), but visual property (*csillan*, *lobban*, *villan*) and auditory event (*nyekken*, *nyikkan*, *koccan*, *zizzzen*) can also be found among them. This shows that the same conformation, that is, the general image schema upon which these events are represented in (Hungarian) linguistic knowledge can be the same for various kinds of events. This has been suggested by previous studies, though it has not yet been checked based on semantic components (Hinton, Nichols, & Ohala 1994, 3–4).

The semantic components and sound features common in the verbs enumerated in (2) are the following:
expressivity/symbolism
conformation
duration of the event (instantaneous and momentary)
sound schema (2 syllables + -an/-en/-ön ending)
intensity (low)

It seems that if there are any common components in two verbs, there would be more. We could not find two words that share some semantic components for example and do not share any syntactic elements or no other semantic components. The principle of ‘similar attracts similar’ was formulated by (Szilágyi 2013) among others.\(^7\) This principle can only be imagined in a system driven by analogy. Our examples show that this principle substantially determines the sound form and meaning of sound symbolic verbs, but also that the boundary between sound symbolic and non-sound symbolic verbs does not exist. Sound symbolic and non-sound symbolic verbs can have different semantic components in common; they may sound very similar, or have similar meaning, and still one of them be considered sound symbolic, and the other non-sound symbolic by native speakers.

\textit{CVC}\textit{VROG, VCVROG, VCVRÔG SOUND STRUCTURE}

Considering the verbs in (3) we can see how a morphology without morphemes can be imagined. Both the examples and the explanation provided below are entirely taken from (Szilágyi 2013).

(3) acsarog, ácsorog, bizsereg, bódorog, csámborog, csavarog, csepereg, csicsereg, csic-korog, didereg, dübörög, fenterereg, fintorog, háborog, hemperereg, hencsereg, hente-reg, hőbörög, hunyorog, kanyarog, kanyarog, kavarog, kecmereg, kesereg, köborog, kö-dorog, könyörög, kucorog, kujtorog, kuncorog, kunkorog, kuporog, lődörög, mocrorog, motyorog, nyekereg, nyikorog, nyomorog, nyöszöröг, pityereg, sanyarog, sestre-eg, sövárog, sündörög, sunyorog, sustorog, sutyorog, szemereg, szendereg, sziszereg, szivárog, szomorog, tántorog, tekereg, ténfereg, toporog, tö-tyorög, ücsörög, vánszorog, viccorog, vigyorog, zavarog, zsugorog, zuborog

The verb ácsorog means ‘to loiter’, i.e. ‘to stand idly somewhere without doing anything useful’, and ücsörög means ‘to sit idly in some place without doing anything useful’. ‘To stand’ in Hungarian is áll, and ‘to sit’ is ül. If we

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\(^7\) For a more detailed explanation see (Szilágyi 2013, 5-6).
want to say *loiter* in Hungarian, we start saying the verb for *stand* and add the -*og* ending to it, completing the form with a syllable that suits the sound structure, -cso- [ʧo]and -csö- [ʧø] in this case. The two variants are the result of vowel harmony.

A) áll …………………. ácsorog
    ül …………………..ücsörög

If there is an existing word we want to use, but it is longer than two syllables, we start saying the word, say one syllable, and then add the -*og* ending, as you can see in the examples A) and B). In A) we have two verbs formed from other verbs, while in B) we have verbs formed from adjectives.

B) nyomorú ……………. nyomorog
    szomorú ……………… szomorog

In the case of the so called passive roots, we only say the passive root (which is one syllable in most cases, nyekk- and zub- in the examples here), add the -rog[ɒg] ending, and complete it with a sound, according to the vowel harmony, -e- [ɛ] and -o- [ɔ] in the examples in C).

C) nyekken ……………… nyekereg
    zubog …………………. zuborog

The verbs with a sound structure of three syllables and -rog ending express high intensity and continuous event or activity.

The semantic components and sound features that are common in the verbs given in (3) are the following:

- conformation
- expressivity/symbolism
- sound schema (3 syllables + -rogword-ending)
- duration of the event (continuous)
- intensity (high)

The higher intensity is more obvious when we compare these forms with the shorter forms of the verbs: bizseg–bizsereg ‘prickle’, csepeg–csepereg ‘trickle’, dűbög–dűbörög ‘lumber’, sziszeg–sziszereg ‘hiss’, vicsog–vicsorog ‘smirk’ etc. The pairs express the same event/action; the difference lies only in the higher intensity of the longer form. Also, we can see that the sound schema and the image schema are the same, though the eventualities are of different types: state, event, sound, expression of face.
SOUND SYMBOLISM AND MEANING PATTERNS

CVNG, VNG SOUND STRUCTURE

The verbs in (4) exemplify another sound schema.

(4) bong, cseng, csüng, dong, döng, ing, kong, leng, pang, peng, ráng, reng, ring, teng, zeng, zsong

This schema consists of one syllable and ends in -ng. These verbs exemplify what Hinton, Nichols, & Ohala (1994) named conventional sound symbolism, i.e. the case when there is an association of certain phonemes or clusters of phonemes with certain meanings (p. 5): the -ng ending suggests an image schema (conformation) tied strongly with a clang, the sound of a bell. The verb kong does express the sound produced by a bell. The source of this group of verbs might be exactly this onomatopoeic verb, kong, that interestingly has an English equivalent with a similar sound form: clang. However, only 7 of the above verbs express sound event. The remaining 9 express movement, each with a similar conformation: there is a general schema common in these verbs no matter the type of event expressed. This in another example that shows that conformation can be the same irrespective of the type of event expressed by the verb.

The semantic components and sound features common among these verbs are:
- conformation
- expressivity/symbolism
- sound schema (1 syllable + -ng word-ending)
- intensity (low)
- duration of the event (continuous)

We can see again that there is a correspondence between the sound schema and specific semantic components: conformation, expressivity and intensity the most important.

CONCLUSIONS AND FUTURE STUDY

The data presented above point towards a grammar based on analogy. The sound schemas described by Szilágyi (2013) set the verbs that could not be explained by traditional morphologies to the starting point of a grammar based on analogy. Moreover, we could see that the sound structure and the meaning of verbs can be motivated by the correlation of certain sound forms
and certain semantic components. There is a meaning pattern related to certain sound schemas, and vice versa. If two verbs have some common sound form features, they tend to also have semantic features in common, and vice versa, and naturally there will also be syntactic properties common among them arising from the common elements of the semantic structures. The analysis of semantic components suggests that a certain sound schema is related to a certain cluster of semantic components, i.e. a certain semantic structure, moreover certain semantic components also tend to go in hand with each other, as we saw it in the case of certain expressive meanings and high intensity. This results in groups of verbs of similar sound schema and similar meaning structure. The governing principles in this grammar are sound structure, mainly word-ending, number of syllables, and semantic components like expressive-symbolic meaning, intensity, and conformation the most important. Phonological studies have shown that sound form and sound segments drive together the iconic (sound symbolic) interpretation of words (see for example Dingemanse et al. 2016). These results also suggest that there is ground for looking onto the correlations between sound structure and meaning patterns in verbs.

I believe that these correspondences also point toward a grammar based on correspondences between sound form and semantic structure, that differs from the traditional ones; in which elements are more strongly tied in impression-based linguistic representations. Study of mimetic words (Kanero et al. 2014 for example) also suggests that “sound symbolic words function as both linguistic and non-linguistic iconic symbols”, and that the perceiving of sound symbolic words “requires a unique integrative process” (Kanero et al. 2014, 1), which means this is different from the perceiving of non-sound symbolic words, based mainly on analogy.

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SYMBOLIZM DŹWIĘKOWY I UKŁADY ZNACZEŃ — PRZYPADĘK CZASOWNIKÓW WĘGIERSKICH

**Streszczenie**


Punktem wyjścia dla badania była grupa węgierskich czasowników o ekspresywnym wydźwięku i znaczeniu. W przypadku onomatopeicznych czasowników możemy zauważyć podobieństwo między ich znaczeniem a formą. Ta cecha odróżnia je od innych motywowanych czasowników, których niearbitralność można zauważyć jedynie w zestawieniu z innymi czasownikami o podobnej formie i znaczeniu. Od początku XX wieku węgierscy gramatycy uznawali te dwie grupy czasowników za odmienne, lecz wzajemnie powiązane. Mimo to w każdym z wymienionych przypadków związek między formą dźwiękową a znaczeniem jest inny, ich zaś miejsce w systemie gramatycznym nadal nie zostało dookreślone.


*Przekład abstraktu Kamil Rusiłowicz*

**Słowa kluczowe:** symbolizm językowy; schematy dźwiękowe; układy znaczeń; intensywność; liczba sylab.