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Phonaesthemes in Standard Arabic

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Abstract: Phonaesthemes are a set of sound-inspired meanings in a language. They represent a set of words, nouns, adjectives, or verbs whose general meaning is related. The present paper sheds light on this area by investigating phonaesthemes in Standard Arabic through a broader consideration of all the possible syllables and sound sequences which are expressive of phonaesthemes. There exist certain sound syllables, mainly initial ones, in Standard Arabic that manifest a noticeable similarity in meaning and this paper attempts at investigating this area. First, phonaesthemes are introduced as to definition, history, and cross-linguistic familiarity. Then, phonaesthemes in Standard Arabic are listed along with a broader discussion. Finally, a few conclusions, results, and implications are proposed at the end of the research.

Key Words: Standard Arabic, Sound-meaning relation, Sound symbolism, Phonaesthetics, Arbitrariness, Ideophone.

1. Introductory Remarks

Phonaesthemes denote a relationship between the sounds used in a word and the meaning of that word, in addition to the common meanings shared by all the words with the same sound sequence. This area of meaning is also known as *sound symbolism*, *ideophone*, *phonaesthetics*, *phonaesthetics*, *phonesemantics*, *phonosymbolism*, and *iconicity*.

Phonaestheme can be seen as a semantic significance of certain letters or words, especially at the beginning of certain words. Such sounds often imply a common area of reference between the words related. Words can be regarded as phonaesthetically significant if the initial sound pairs are the same and the meaning of every single word is similar to the other related words.

Arbitrariness has always been a significant feature that rises to surface whenever the meaning-form relationship is debated or questioned. Bolinger (1949) stressed the importance of comparative linguistics when dealing with semantics. He viewed the resemblance in meaning among certain words as a justification to the fundamental assumptions of linguists that language is arbitrary.

Pharies (1985:90ff) viewed onomatopoeia as a sign of sound symbolism, being expressive of all the imagined iconicity of any word in the language. He based his assumption on the sound studies that have raised the issue of iconicity and phonesthetics.

Smith (2014) maintained that blends in English are phonaesthematic in sense. He investigated all the blends listed in the Oxford English Dictionary, and he found that blends imply a sort of sound symbolism. For example, he cited blends such as *smog*, *smarm*, *smash* carry an insulting or pejorative sense.

2. Background and Similar Studies

The relationship between sound and meaning, whether in general or in a given language, has seen various attempts of investigation and analysis. Several previous studies in English, as well as in other languages, have proposed a considerable set of sound-inspired meanings, both in vowels and consonants. The issue of sound-meaning relationship has attracted a lot of scholarly work. Moreover, such relationship between certain sounds and meanings or semantic references has always been an area of significance and debate. Phonesthematics is the study of the relationship between sounds and words. Crystal (2008:361) maintained that "phonaesthetics is a term sometimes used in linguistics to refer to the study of the aesthetic properties of sound, especially the sound symbolism attributable to individual sounds. Cases such as the [ip] vowels in a language signaling smallness (cf. *teeny*, *weeny*, etc.) have been suggested as evidence for a limited sound/meaning correspondence in language. The sound units concerned being referred to as 'phonaesthemes'. The branch of stylistics which studies such expressive effects (e.g. the onomatopoeia of poetry) is known as phonostylistics."

The term 'phonaestheme' was first used by Firth (1930/1964:184) for sequences like the *sl-* of *slack*, *slouch*, *slush* and the *-ump* of *slump*, *bump*, *dump*. Firth described these elements as affective and he noted that they have become identifiable after repeated appearances in particular kinds of context. 'It is all a matter of habit' (187). But establishing the nature of phonaesthemes and deciding which parts of words can plausibly be regarded as phonaesthetic (or phonaesthemic) elements is not at all straightforward.

Adams (2001:121) maintains "There is obviously some-thing non-arbitrary in the following examples of sound-denoting words syntactically detached from their surroundings: Check for gas leaks. Light a match and – whoomph/ Thwack! Boston's Jim Rice sends the first pitch sailing over the left-field wall."

Pharies (1958:95ff) held that sound symbolism can be accounted for through psychological and semantic foregrounds in order to understand the iconic similarity between words.

Crystal (2008:443) added "sound-symbolism is used in semiotics and linguistics to refer to a direct association between the form and the meaning of language: the sounds used reflect properties of the external world, as in cases of onomatopoeia (e.g. cuckoo, murmur, crash) and other forms of synaesthesia (e.g. *sl-* in such words as *slimy*, *slither*). Sound-symbolic words are also sometimes referred to as mimetic."

Fromkin et al. (2014:4) stated that "There is some sound symbolism in language—that is, words whose pronunciation suggests their meanings. Most languages contain onomatopoeic words like buzz or murmur that imitate the sounds associated with the objects or actions they refer to. But even here, the sounds differ from language to language and reflect the particular sound system of the language. In English, cock-a-doodle-doo is an onomatopoeic word whose meaning is the crow of a rooster, whereas

in Finnish the rooster's crow is kukkokiekuu. Forget gobble gobble when you're in Istanbul; a turkey in Turkey goes glu-glu."

They (ibid.:5) added "Sometimes particular sound combinations seem to relate to a particular concept. Many English words beginning with *gl* relate to sight, such as glare, glint, gleam, glitter, glossy, glaze, glance, glimmer, glimpse, and glisten. However, *gl* words and their like are a very small part of any language, and *gl* may have nothing to do with "sight" in another language, or even in other words in English, such as gladiator, glucose, glory, glutton, globe, and so on. To know a language we must know words of that language."

Booij (2007:22) believes that "The overview of word creation does not exhaust the set of special form-meaning correspondences in words. Sound symbolism exists in words beginning with the same sound sequence. For instance, words with initial *sw*- typically denote swinging movements (sweep, swing, swingle, etc.), and the following Dutch words with *kr*- all refer to unpleasant, twisted notions: *krijt* "to shout", *kramp* "cramp", *krank* "ill", *krimp* "shrink". The similarity at a more abstract level between morphology proper and word creation is that both are based on patterns of paradigmatic relationships between sets of words."

Jakobson and Waugh (2002:190ff) maintained that the purpose of a speech sound and the abstract meaning could be expressive of a symbolic connotation or relation.

Phonesthemes or the issue of sound-meaning relationship has much been discussed and investigated across different languages. Adams (2001:24-27) listed more than nine paired letters or sound which carry certain meanings in them. As early as the 1920s, Jespersen (1960) and Sapir (1929) proposed that short vowels in English and in other languages in the world express smallness. Hence, they both viewed this meaningful feature as a universal aspect that is found in other languages.

In English, phonesthemes have been studied in more than one attempt by different scholars and linguists. Firth's (1930:184ff) study is a pioneering scholarship into the relationship between certain sounds and meanings. He (ibid.) listed thirteen initial sequences of sound combinations which he claimed to have suggested certain meanings. Of these, for instance, are the combinations *sl*- denoting a sense of *pejoration* as in *slack*, *slouch*, *slush*, *slime*, *sloppy*, *sluggard*, *slattern*, *slit*, *slay*, *slant*, *slither*, *slink*, *slaver*, *slump*, *slate*, *dr*- denoting hanging and falling as in *drip*, *drop*, *droop*, and *kl*- denoting clumsiness or stupidity as in *clay*, *clot*, *clod*, *cloy*, *clumsy*, *cling*. Sturtevant (1947:109) identified a few initial sound clusters that are thought of being semantically meaningful, including *kr*- (sudden or loud noise) as in *crash*, *crack*, *crank*, *gl*- (*light*) as in *glare*, *gleam*, *glow*, *gloom*, and *fl*- (*fast movement*) as in *flicker*, *flitter*, *flame*, *flounce*, *flash*.

Bolinger (1949) dedicated a whole book for this phenomenon whereby he raised the issue of non-arbitrary associations in several languages between meanings and form. His study tackled sound-meaning relation in three languages (English, French, and Italian).

Marchand (1966:315-335) identified ten initial sound sequences with a significant aspect of a remarkably common sense or meaning. These are *st-*, *kr-*, *sw-*, *tw-*, *str-*, *skw-*, *sn-*, *sl-*, *kl-*, and *gr-*. The senses included in these initial syllables ranged from generic adjectives, physical attributes, actions, movement, to disturbance.

Bowles (1995:104) investigated phonaesthemes in English by undertaking a considerable investigation of the words listed in the English dictionaries. He suggested nine phonaesthematic syllables used at the beginning of words.

Crystal (2002) claimed that *sl-* initial syllables in English carry negative as well as non-negative connotations, following comparing and counting all the words beginning with this syllable. He (ibid.) also based his account on several English dictionaries which he consulted for his study.

Bar-Lev (2005) accounted for sound similarity in Hebrew with a special reference to Arabic, as he detailed how certain initial consonants carry similar meanings. He cited two consonants in Arabic that are suggestive of seemingly similar or related meanings, and which he claimed to

A recent account on English phonaesthematic associations by Reay (2006) suggested six sounds or sound combinations with a possible association of meaning. His study claimed that *sk-*, *sl-*, and *kl-* denote a physical movement or action. Reay (2006) listed a few concrete examples of initial consonants with significant meanings including *d-* foolishness as in dead, dim, deaf, and the like, *sl-* attack as in slam, slander, slag, *sw-* contact as in sweep, swat, swipe, swim.

As for other languages, phonaesthemes have also been found to be significant and remarkable. Heinsoo and Saar (2015) analysed specific phonologically meaningful syllables in four Finnic languages (Estonian, Finnish, Ingrian, and Votic). They contrasted these syllables between the four languages and they found that expressive verbs may carry similar meanings in their roots or stems. They also noted that initial consonant clusters in these languages denote considerable similarities in a few related meanings.

Haynie et al. (2014) focused on the covert symbolisms found in the sounds of some indigenous languages of Australia. The most significant associations of meaning that have been found in their study were the locative and physical connotations denoting smallness, nearness, and proximity, having concluded that such connotations can be meaningful only if they are attached to vowel segments in the words given.

Abelin's (2014) study has been concerned with phonaesthemes in Swedish brand names. Abelin analyzed the Swedish lexicon with emphasis on the sound symbolic properties of initial and final consonant clusters. He found that every constructed word is interpreted correctly by at least some dimensions such as lengthening, reduplication, and illegal phonotactics.

Ibarretxe-Antuñano (2009) elaborated on the relationship between movement imitatives, i.e. sound symbolic expressions for the characterization of movement and their utilisation in the lexicalisation and description of motion events in Basque. He

found that the Basque initial syllables carry certain phonesthematic meanings where nine categories of movements and positions have been identified in relation to similarity of sounds, based on the lexical comparison of words.

3. Methodology

The paper is a descriptive account in a rather quantitative approach of analysis without any frequencies or percentages. It focuses on all the initial consonantal sequences that may carry possible or related meanings. The examples and meanings suggested are self-generated, i.e., they are based on the researcher's own thorough analysis. Additionally, two Arabic dictionaries have been consulted as a model for glossemes or words. They are; معجم اللغة العربية المعاصرة and مختار الصحاح.

4. Realization of Phonaesthemes in SA

There is a considerable amount of sounds and sound sequences in Standard Arabic (SA) that demonstrate specific meanings, especially in the initial consonants.

5. Syllables and Senses

There are certain syllables and sounds, mainly initial ones, whose meaning in one way or another expresses a common sense in the words related. Below is an account of these syllables along with the derived meanings. The categories are classed alphabetically within which the related letters are listed.

١. باد

This a syllable implies initiating, launching, starting, or bringing forth, as in;

بدأ *to start*

بدر *to initiate*

بدع *to innovate*

٢. بر

When used initially, these two sounds suggest rise, coming, advance, initiation, arrival, or a significant growth, as in;

برز *to rise*

برع *to be volunteer*

برق *to glimmer*

برعم *to spring forth*

برأ *to create, to originate*

٣. بـ+دـ

This is a syllable that suggests deepening, or moving inwards, and the following words express that sense;

بلع *to swallow*

بلغ *to reach*

٤. جـ+زـ

Most words starting or carrying this syllable imply shortening, clipping, cutting, or stripping, as in;

جز *to clip*

جزر *to cut*

جزم *to cut*

جزل *to curtail, to shorten*

٥. جـ+سـ

These two sounds suggest touching or close connection or relatedness, as in;

جسد *body*

جسم *body*

جَسَرَ *to bridge, to connect*

جَسَّ *to touch*

٦. جـ+مـ

When these two sound merge in a single syllable, they suggest gathering, solidity, or bringing together, as in;

جمد *to freeze*

جمع *to gather*

جمهر *to assemble in multitude*

جَمَلَ *to add*

٧. حـ+رـ

This initial sequence of consonants suggests danger, gravity, seriousness, or risk, as in these words;

war حَرْب
heat حَر
burning حَرَق
to deprive from حَرَمَ
illegal حَرَام

Related to this syllable are a few words whose related sense implies movement, as in;

to move حَرَّكَ
to plough حَرَثَ
to slant, to deviate حَرَفَ

٨. خ+شـ

It is a syllable whose sense is rudeness, coarseness, or solidity, as in;

wood خشب
coarse خشن
to be solid خشف

Derived from this syllable is another sense that carries the meaning of fear, awe, or submission, as in;

to fear خشي
to be submissive خشع

٩. خ+طـ

These two fricatives suggest danger, risk, hurt, damage, and gravity. Many words in SA beginning with this syllable imply such senses;

danger, risk خطر
wrong, problem خطب
mistake, to mistake خطأ
sin خطيئة

١٠. خ+حـ

A syllable that suggests in one way or another a sense of breaking into or going throw, as in;

to perforate خرم

to penetrate خرق

to pierce خرز

to come out خرج

١١. خ+ف

A syllable where the related words that suggest lessening, minimizing, diminishing, or retarding, as in;

to lessen, to decrease خفف

to faint خفت

to lower خفض

to pulsate خفق

to fear خاف

١٢. د+ح

Here, the meaning is concerned with rejection, defiance, or challenge, as in;

to refute دحض

to defeat دحر

١٣. د+ل

This initial cluster often implies close or intimate touch, relation, exchange, or effect;

to fondle دلع

to coddle دلال

to rub دلك

١٤. ر+ج

A syllable that suggests irritation, shaking, instability, or vibrating, as in;

to shake رجج

to stir, to agitate رجف

رجج *to make probable*

رج *to shake, to move*

رجرج *to vibrate*

١٥. ر+ك

A syllable that gives the sense of attaching, touching, close movement, or depending, as in;

ركب *to ride*

ركن *to rely on*

ركع *to bow down*

ركز *to be supported*

ركد *to pause on the ground*

١٦. ر+د

This is a syllable that may imply replying, responding, or reacting, as in;

رد *to reply, to respond*

ردع *to deter*

ردم *to return*

ردد *to repeat back*

١٧. ر+م

These two sounds imply a physical or bodily movement, as in;

رمق *to glance*

رمش *to blink*

١٨. س+م

The words here share the sense of thickness, filling, bulkiness, or to be in a block, as in;

سُمك *thickness*

سَمَن *to fatten, to be fat*

١٩. س+ح

A syllable that gives the sense of pulling, attracting, or steering towards a certain direction, as in;

سحب *to pull*

سحل *to drag*

٢٠. س+د

This initial combination of consonants imply closing or locking;

سد *to close*

سدل *to wrap*

٢١. ع+ص

It is a syllable that suggests storming, heavy striking, or violent raging, as in;

عصف *to storm*

عصب *to be nervous*

إعصار *hurricane*

عصى *to disobey*

عصيان *disobedience*

٢٢. ع+ض

A syllable that implies strength, connection, or building, as in;

عَضم *bone*

عَضَلَ *to be muscular*

عَضَدَ *to support*

٢٣. ع+ق

This syllable suggests deficiency or lack, as in;

عَقَمَ *to sterile*

عقم *to be infertile*

عقر to be barren

٢٤. ز+لـ

To imply moving sideways;

زَلَّ to slip

زَلَقَ to slip

زَلَجَ to slide

٢٥. س+ب

In this syllable, the meaning is closer to probing searching, or poking into, as in;

سبح to swim

سبر to probe

سبق to proceed

٢٦. ط+م

In this syllable, the sense is closer to covering, concealing, or, as in;

طمر to bury

طمس to remove

طَمَّ to cover with water

٢٧. غ+ر

This is a syllable with the sense of inserting, piercing into, or plunging, as in;

غرز to pierce

غرس to plant

غرف to dip

غرق to sink

٢٨. غ+ف

This syllable implies pardon, inattentiveness, carelessness, or disregard, as in;

forget, overlook غَفَلَ

pardon, forgive غَفَرَ

to doze غَفَى

٢٩. غ + ل

These two consonants often suggest enclosing or wrapping;

to close غَلَقَ

to wrap غَلَفَ

to close tightly غَلَضَ

to restrain غَلَّ

٣٠. غ + ط

These two consonants sometimes suggest immersion or sending down;

to immerse غَطَسَ

to cover with غَطَى

٣١. غ + م

These two consonants imply going deeply;

to go deeply غَمَقَ

to dip غَمَسَ

to plunge غَمَدَ

٣٢. غ + ف

These two consonants suggest disregard, indifference, carelessness, or tolerance;

to slumber غَفَى

to disregard غَفَلَ

to forgive غَفَرَ

٣٣. فت

This is a syllable whose sense is always related to opening, inquiring, searching, or investigating. The following are some of the words exemplifying these senses;

فتح *to open*

فتق *to tear*

فتش *to inspect*

فتت *to break into pieces*

٣٥. ق + ش

These two consonants suggest a sort of surface removing or taking away slightly;

قش *to sweep*

قشط *to skim*

قشر *to peel*

قشد *to scratch*

٣٦. ك + ب

A syllable that suggests closing, restraining, confining, or holding back, as in;

كبح *to restrain*

كبت *to restrain*

كبس *to press*

كبل *to chain*

٣٧. ق + ص

These two consonants imply a sense of cutting away or removing parts;

قصم *to break*

قصف *to strike*

قصل *to cut*

قصر *to clip*

قصب *to cut*

٣٨. ق+ط

ق+ط suggests cutting, clipping, separation, cropping, or curtailing, as there are a few words that share these senses;

قطع *cut*

قطم *to bite*

قطف *pick*

قط *clip*

قَطُرَ *to make into pieces,*

قطل *cut off*

٣٩. ك+سـ

This sequence often implies breaking, curtailing, terminating, or finishing;

كسر *to break*

كسف *to darken, to eclipse*

كسح *to cripple*

كسد *to slump, to dull*

كسل *to be drowse, to be lazy*

٤٠. م+كـ

A syllable that carries the meaning of plotting, planning, or secretly devising and attempting, as in;

مكر *to deceive*

مكيدة *deception*

مكن *to empower, to make strong*

٤١. هـ+لـ

This syllable gives the impression of running, restlessness, fear, agitation, or dismay, as in;

هلع *to be restless*

هَلَّ *to frighten*

هَلَكَ *to cause to perish*

هَلَسَ *to agitate*

هَلُمَّ *Come on!*

٤٢. ن+هـ

A syllable that suggests taking, holding, or gripping, as in;

نَهَبَ *to loot*

نَهَشَ *to seize*

نَهَلَ *to quaff*

نَهَمَ *to devour*

٤٣. ن+هـ

It is a syllable that often expresses prevention, shouting, denial, or forbidding, as in;

نَهَى *to negate, to prohibit*

نَهَرَ *to rebuke*

نَاهَضَ *to object*

نَهَقَ *to shout*

٤٤. ه+ر

A syllable that suggests running, fleeing, or moving disorderly, as in;

هَرَبَ *to run*

هَرَوَلَ *to walk*

هَرَعَ *to run towards something*

هَرَجَ *to cause disorder*

٤٥. ه+د

These two sounds make a syllable that implies destroying, terminating, or destructing, as in;

to destroy هدم

to demolish هد

to waste هدر

to threaten هدد

٤٦. هـ + ز

This syllable expresses vocal effect or shock since there are several words, beginning with these two sounds, imply similarity in this sense;

to shock, to shake هز

twang هزم

to chant هزج

to laugh هزر

to joke, to be humorous هزل

to mock هزأ

thunder sound هزيم

5. Concluding Remarks

1. Most meanings are based on initial clusters.
2. The examples discussed in this paper show a challenging evidence that there are certain syllables and sound sequences in SA that imply common meanings or references.
3. The striking relatedness found between certain two-sound syllables and the meanings expressed by the related words is an indication that sound-meaning relation in SA is realizable and traceable.
4. The fact that the apparently noticeable relatedness between certain words in a language might have triggered, during some periods of the history of that language, the creation of new words following an early two-letter syllable is still controversial even though it is highly questioned.
5. Interestingly, there are certain sound combinations in SA that may manifest a meaning relevancy to various senses. In this token, the letters

هـ + ز is mostly related to locative, non-animate

6. Interestingly, most initial consonants with a phonaesthematic sense are fricatives ; غ and plosives; ق د ب ط ك. Also most post-initial consonants are fricatives and plosives.

7. Phonaesthemes in English and SA can be compared and contrasted in order to check how different and similar they are.

8. The semantics of individual sounds, consonants or vowels, whether in SA or in English has not been so far investigated thoroughly, and therefore a further analysis is needed to check the possibility of sound-meaning relationship at the single sound level.

9. The sound-meaning relation can also be investigated in the other varieties or dialects of SA.

6. References

Arabic References:

-الرازي، أبي بكر محمد بن شمس الدين. (١٩٨٦). *معجم مختار الصحاح*. لبنان: مكتبة لبنان.

-عمر، أحمد مختار. (٢٠٠٨). *معجم اللغة العربية المعاصرة*. القاهرة: عالم الكتب.

English References:

-Abelin, Å. (2014). "Phonaesthemes and sound symbolism in Swedish brand" *Ampersand: An International Journal of General and Applied Linguistics*, 2:1(1-23).

-Adams, V. (2001). *Complex Words in English*. London and New York: Routledge, Taylor and Francis Group.

-Bar-Lev, Z. (2005). "Arabic key consonants" *Journal of Arabic and Islamic Studies*, 6 (24-63).

-Bergen, B. (2004). "The psychological reality of phonaesthemes" *Language*, 8:2 (290-311).

-Booij, G. (2007). *The Grammar of Words: An Introduction to Linguistic Morphology*. 2nd edition. Oxford: Oxford University Press.

-Bolinger, D.(1949). "The sign is not arbitrary" *Boletín del Instituto Caro y Cuervo*, 5 (52-62).

-Bordbar, M. and Kambuziya, A. (2016). "Iconicity vs. arbitrariness of sound symbolism phenomenon through a contrastive analysis framework" *International Journal of English Language and Linguistics Research*, 4:2 (17-30).

-Bowles, H. (1995). "The semantic properties of the phonaestheme" *Studi Italiani di Linguistica Teorica ed Applicata*, 1 (91-106).

- Cassidy, F.G. (1983). "The intensive prefix KER-" *American Speech*, 58:4 (291-302).
- Crystal, D. (2002). *The English Language*. London: Penguin Books Ltd.
-(2008). *A Dictionary of Linguistics and Phonetics*. 6th edition. Oxford: Blackwell Publishing.
- Firth, J.R. (1930/1964). *The Tongues of Men, and Speech*. London: Oxford University Press.
- Fromkin, V., Rodman, R. and Hyams, N. (2014). *An Introduction to Language*. 10th edition. Boston, Mass: Wadsworth, Cengage Learning.
- Haynie, H., Bower, C., and LaPalombara, H. (2014). "Sound symbolism in the languages of Australia" *PLoS ONE*, 9:4 (1-16).
- Heinsoo, H. and Saar, E. (2015). "Sound symbolism of expressive verbs in Finnic languages (Estonian, Finnish, Ingrian, Votic)" *The ESUKA-JEFUL: Journal of Estonian and Finno-Ugric Linguistics*, 6:1 (55-74).
- Hinton, L., Nichols, J. and Ohala, J.J. (Eds.) (1994). *Sound Symbolism*. Cambridge: Cambridge University Press.
- Ibarretxe-Antuñano, I. (2009). "Lexicalisation patterns and sound symbolism in Basque" In Javier Velanzuela, Ana Rojo, and Cristina Soriano (Eds.). *Trends in Cognitive Linguistics: Theoretical and Applied Models. Duisburg Papers on Research in Language and Culture*. Vol. 76. Frankfurt: Peter Lang GmbH, (pp. 239-254)
- Jakobson, R. and Waugh, L.R. (2002). *The Sound Shape of Language*. 3rd edition. Berlin and New York: Mouton de Gruyter.
- Jespersen, O. (1960) "Symbolic value of the vowel I" In Jespersen, O. *Selected Writings of Otto Jespersen*. Abingdon: Routledge, (pp.286-299).
- Käsmann, H.(1992)."Das Englische phonasthem s/-" *Anglia*, 110:3/4(307-46).
- Malkiel, Y. (1990). *Diachronic Problems in Phonosymbolism*. Vol.1. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Marchand, H. (1966). *The Categories and Types of Present-Day English Word-Formation*. Alabama: University of Alabama Press.
- Perry, L.K., Perlman, M., and Lupyan, G. (2015). "Iconicity in English and Spanish and its relation to lexical category and age of acquisition" *PLoS ONE*, 10:9 (137-147).
- Pharies, D.A. (1985). *Charles S. Peirce and the Linguistic Sign*. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Reay, I. E. (2006). "Sound symbolism" In Allan, K. (Ed.). *The Concise Encyclopedia of Semantics*. Oxford: Elsevier, (pp.893-901).

- Sapir, E. (1929). "A study in phonetic symbolism" *Journal of Experimental Psychology*, 12(225-239).
- Shore, B. (1996). *Culture in Mind: Cognition, Culture, and the Problem of Meaning*. Oxford: Oxford University Press.
- Smith, C. (2014). "The phonesthetics of blends: A lexicographic study of cognitive blends in the OED" *Explorations in English Language and Linguistics*, 2:1 (12-45).
- Sturtevant, E. H. (1947). *An Introduction to Linguistic Science*. New Haven, CT: Yale University Press.
- Voeltz, F.K. E. and Kilian-Hatz, C. (Eds.). (1985). *Typological Studies in Language. Vol. 44: Ideophones*. Amsterdam/ Philadelphia: John Benjamins Publishing Company.
- Willett, M. (2015). *A Study of the Productivity of Twelve English Onset Phonaesthemes*. PhD Dissertation, Cardiff University.