SOUND SYMBOLISM IN NEO-ARAMAIC

GEOFFREY KHAN[1]

Sound symbolism is a phenomenon that has been documented in many languages of the world (Reay 2006; Childs 2014). In its most basic form, this invovles the simple imitation of sounds (onomatopoeia). Sound symbolism, however, involves also the correspondence between sound and meaning. Particular sounds, clusters of sounds or phonological features may be associated with a particular domain of meaning. Such phonological features have been termed 'ideophones' (Voeltz and Kilian-Hatz 2001) or 'phonesthemes' (Reay 2006). It has been recognized that this phenomenon of linguistic iconicity, i.e. the existence of a formal property in a sign that corresponds through similarity to a property of its referent, far from being marginal as claimed in the structuralist tradition, has played an important role in the evolution of language (Haiman 2018).

One of the consequences of sound symbolism is that groups of words develop that share sounds and their associated meaning. The sound symbolism facilitates such proliferation of 'constellations' of words (Bolinger 1965), due to the aid it gives to learning and comprehension of new words (Childs 2014, 6). In English, for example, initial *sl-* is associated with sliding movement and has spread to a series of words expressing this semantic domain, such as *slalom, sledge, sleigh, slick, slide, slip, slither*, etc.

In this paper I shall examine sound symbolism in North-Eastern Neo-Aramaic (NENA) dialects. In these dialects it can be identified as performing a variety of functions.

---

[1] It is a great pleasure to dedicate this article to John Healey, whose excellent work on Aramaic and other Semitic languages has always been an inspiration for me.

1.0. EXPRESSION OF DIFFERENCES IN MAGNITUDE

In the Christian Urmi dialect (henceforth C. Urmi) [2] one function of sound symbolism it to express different degrees of magnitude of entities, properties, gradable adjectives, quantifiers, or the force of actions.

Various sound shifts have occurred that are exploited to symbolize the diminutive. These shifts involve two basic features: (i) increasing pitch and (ii) strengthening of consonants. [3] This is achieved by processes such as making an originally emphatic (i.e. pharyngealized) word plain by removing the emphasis, strengthening aspirated stops and affricates to the corresponding unaspirated consonants, and affricating stops and sibilants.

The fundamental articulatory gesture of phonological emphasis is pharyngealization, which involves the constriction of the upper pharynx with increased muscular tension. This is a non-primary articulation that accompanies the primary articulation of consonants and vowels. In the Christian Urmi dialect phonological emphasis is not a feature of individual consonant segments, as it is in many Neo-Aramaic dialects and in Arabic, but rather it is suprasegmental and its domain is in principle the entire word. In many cases its historical background can be traced to the original presence in the word of an emphatic consonant segment. The historical emphatic consonant phonemes *ṭ and *ṣ, however, no longer exist as segments, but rather emphasis has become detached from the feature profile of these segments and become a 'floating' suprasegmental feature. The phonological domain of emphasis, therefore, is a word rather than a segment. In the transcription suprasegmental emphasis is marked at the beginning of its word domain by the symbol ⁺, e.g. ⁺soma < *ṣawmā 'fast (abstention from food)', ⁺ṭamər < *ṭāmər 'he buries'.

When the historical emphatic *ṣ lost the feature of pharyngealization from its segmental profile, it merged on the segmental level with historical *s resulting in one phoneme /s/.

When the historical emphatic *ṭ lost the feature of pharyngealization from its segmental profile, on the other hand, it retained a glottal tension that distinguished

---

it from the historical plain aspirated *t, creating the opposition /ṯ/ (unaspirated) : /t/ (aspirated). The muscular tension associated with the emphatic segment *ṭ and its tendency to be pronounced with a constricted larynx converged with the tense glottal setting of unaspirated /ṯ/. So on the phonetic level the first segment in a word such as ⁺ṯamər 'he buries' would sound similar to the corresponding emphatic segment in its historical antecedent *ṭamər. On a phonological level, however, there has been a reanalysis, which can be represented thus:

Word level   [+Pharyngeal]

Segment level: ṭ   >   ṯ
                    [+Pharyngeal]   [+Tense]
                    [+ Tense]

This harmonic feature of suprasegmental backing no doubt developed under the influence of vowel harmony of Azeri Turkish with which the dialect was in contact. There was, however, only partial convergence to the Turkish harmonic system.[4]

As a result of the reanalysis of segmental emphasis as suprasegmental emphasis, a ternary system of stops emerged: t, ṯ, d (unvoiced lax aspirated, unvoiced tense unaspirated, voiced). This is likely to have been stimulated by contact with non-Semitic languages in the region. The Caucasian languages and other languages spoken south of the Caucasus across an area extending into northern Iran had a similar ternary system of stops (Chirikba 2008, 44–45). In the Caucasian languages the tense member is a glottal ejective. This is found also in non-Caucasian languages spoken in the Caucasus region, such as dialects of Armenian (an Indo-European language) spoken in Georgia. In Eastern Armenian spoken further south in Armenia and north-western Iran the tense member is an unaspirated stop, which corresponds to the phonetic quality of the unaspirated tense /ṯ/ of C. Urmi. Eastern Armenian has also a ternary system of labials, affricates and velar stops, but only a binary system of fricatives (voiced—unvoiced, e.g. s, z). This is parallel to the system of phonemes that developed in C. Urmi, which includes unaspirated unvoiced ṯ, p̂, c̦ and č̦. This is shown in the following table, in which the transcription conventions adopted for the C. Urmi dialect are used to represent the corresponding sounds in Armenian:

---

[4] For further details see Khan (2016, vol. 1, 107-131).

	C. Urmi	Eastern Armenian
labials		
voiceless aspirated	/p/	/p/
tense	/p̂/	/p̂/
voiced	/b/	/b/
dental/alveolar stops		
voiceless aspirated	/t/	/t/
tense	/ṭ/	/ṭ/
voiced	/d/	/d/
dental/alveolar fricatives		
voiceless	/s/	/s/
voiced	/z/	/z/
Velar		
voiceless aspirated	—	/k/
tense	/ḳ/	/ḳ/
voiced	/g/	/g/ —

Within C. Urmi there are several regional varieties, which differ with regard to the affrication of consonants articulated in the palatal region. These can be regarded as variant phonetic realizations of the particular phonemes and are represented below in square brackets. The second of the pairs of variants in each case corresponds to the realization of the corresponding Eastern Armenian phoneme:

	C. Urmi	Eastern Armenian
Post-alveolar affricates		
voiceless aspirated	/c/ [cʰ]/[t͡ʃʰ]	/č/ [t͡ʃʰ]
tense	/c̣/ [c]/[t͡ʃ]	/č̣/ [t͡ʃ]
voiced	/ɟ/ [ɟ]/[d͡ʒ]	/j/ [d͡ʒ]
Dental/Alveolar affricates		
voiceless aspirated	/č/ [t͡ʃʰ]/[t͡sʰ]	/ĉ/ [t͡sʰ]
tense	/č̣/ [t͡ʃʰ]/[t͡s]	/ĉ̣/ [t͡s]

voiced	/j/ [ʤ]/[ʣ]	/ĵ/ [ʣ]

The lack of a ternary system of fricatives in Armenian would have induced the merger of *ṣ with *s in C. Urmi.

One process of sound symbolism in C. Urmi is the removal of suprasegmental emphasis from a number of nouns that express small objects and creatures, e.g.

ṱup̂ra	'tail' < *ṭupra (cf. Syriac ṭep̄rā, C. Qaraqosh bar-ṭupra 'strap for securing saddle behind the tail')
səpra	'sparrow (m.)' < *ṣəpra (cf. Syriac ṣeppərā, C. Qaraqosh ṣəpra)
k̭əmsa	'locust, grasshopper; dragon-fly' < *qamṣa (cf. Syriac qamṣā, C. Barwar qamṣa)

This removal of emphasis consist of the stripping of the suprasegmental 'floating' feature 'pharyngeal' from the word.

The lack of emphasis in the following loanwords from Persian that denote small objects may also perhaps be explained as being conditioned by diminutive sound symbolism:

mazrak̭	'stick with cushion for sticking dough to oven' < Persian mazrāq 'javelin' (< Arabic mizrāq)
məsk̭al	'small unit of weight' < Persian mesqāl

A loanword that contains a long /ā/ in Persian is normally emphatic (Khan 2016, para. 1.5.1.). e.g. +sarbaz 'soldier' < Persian sarbā́z. This is because Persian long /ā/ has a back quality and this induces a back, pharyngealized suprasegmental resonance when integrated into the phonological system of the C. Urmi dialect.

The lack of the expected emphasis in the following loaned adjective is also likely to be due to diminutive sound symbolism:

nazuc	'thin' < Persian nāzok

The process of removal of emphasis for the purpose of diminutive sound symbolism has been applied also to several verbs. This applies, for example, to reflexes of the verb with the historical form *šāṭeḥ. Two doublets exist of the this etymological form, viz. the form +šaṱəx, preserving the emphasis, and the form šaṱəx, from which the suprasegmental feature of emphasis has been removed. The form preserving the emphasis, +šaṱəx, has the sense of 'to stretch out (a person on the ground), to knock down (a person with force)'. The plain form šaṱəx, however, denotes 'to spread out (a light object, e.g. washing on a line)'. The form šaṱəx with the emphasis removed expresses a lighter, less forceful action than the emphatic +šaṱəx.

One may say that it verb *šaṭəx* is a diminutive of ⁺*šaṭəx*, formed by the stripping out of the feature of emphasis.

The emphasis in some minimal, or near minimal, pairs of verbs that are distinguished only by the feature of suprasegmental emphasis can be given an ideophonic interpretation, in that the member of the pair with emphasis expresses a stronger action than that the one expressed by the plain verb. Some of these pairs may be doublets, as is the case with the pair *šaṭəx*—⁺*šaṭəx* discussed above, e.g.

zak̯zə̯k QI   'to throb (with pain)'
⁺*zak̯zə̯k* QI   'to shiver (from cold)'

čanɉər QI   'it jingles'
⁺*čanɉər* QI   'it scratches with a paw'

The contrast may be principally based on the level of sound, in that the emphatic member expresses a louder sound or a sound with a lower resonance, e.g.

parpər QI   'to flap (flag)'
⁺*parpər* QI   'to blow (one's nose) loudly'

čarčər QI   'to scream'
⁺*čarčər* QI   'to creak (door)'

Another verb that seems to have had its emphasis removed for ideophonic purposes to express a small sound is *ṭanṭən* 'to hum softly'. This is likely to be a loan from Arabic *ṭanna* 'to hum'. The emphasis is retained in the variety of the C. Urmi dialect spoken in the village of Dizatacya (⁺*ṭanṭən*) and the word *čena* 'mosquito' in C. Barwar, with an emphatic affricate, is likely to be ultimately related to this root.

An example of the increase of pitch of a vowel for diminutive sound symbolism is the form *brita*, which is a reflex of the etymological form **brattā* 'girl, daughter'. In some varieties of C. Urmi (e.g. the village of Canda in Georgia) this form *brita* exists as a doublet alongside the form *brata*, which has the same etymology. In such varieities the form with the vowel of higher pitch, *brita*, is used with connotations of greater endearment in the sense of 'daughter' while the form with the original low vowel *brata* means 'girl' in general. This is a case of diminutive sound symbolism for the sake of endearment. One may compare the use of diminutive derivational suffixes in kinship terms such as *ʾaxuna* 'brother' (< **ʾax* + *-una*), *bruna* 'son' (< **bar* + -

una). As with the /i/ in kinship term *brita* 'daughter', these diminutive suffixes are a fixed feature of the words, and so express a conventionalized endearment associated with the terms.

In nouns expressing small items, particles expressing smallness, or verbs expressing actions of inherently short duration or diminutive sound, unvoiced stops and affricates that were originally lax aspirates are made tense unaspirates. This is found in C. Urmi in words that are NENA in origin and also loanwords from Azeri Turkish, in which the unvoiced stops are aspirated in the source language, e.g.

ṱəlpa	'eyelash' < *təlpa* (cf. Syriac *tallīpē*, Ṭuroyo *tlafine*)
ṱap̂təp̂ QI	'to blink; to flicker' < *taptəp* (cf. C. Barwar *tarəp, mtarpəθ, rapəθ* 'to blink')
p̂ərṱuxə	'crumbs' < *pərtuxə* (cf. *partəx* 'to crumble', C. Barwar *pərtoxə*)
p̂ərṱa	'crumb' < *pərta* (cf. C. Barwar *pərtika* 'splinter')
p̂alṱəč̣ QI	'to stutter' < Azeri pəltəkləmək
p̂ač̣p̂əč̣ QI	'to whisper' cf. Azeri pıçıldamaq
p̂ərça	'a little, a crumb' cf. Azeri parça
xač̣č̣a	'a few, a small amount' < *ḥaḏ* + Turkic suffix *-ča*

The verb *č̣oč̣ə* (root *č̣-wč̣-y*) 'to twitter' (< *ṣawṣe*), which expresses a small high pitched sound, has lost the emphasis of the original *ṣ and the resulting plain sibilant has been hardened to a tense affricate /č̣/.

In plain words the unaspirated stop /ṱ/ is occasionally affricated to /č̣/ by an ideophonic process to increase the pitch and express the diminutive. This is identifiable in the following pair of verbs, which are likely to be doublets, the form with the affricate expressing a sound of higher pitch:

ṱanṱən QI	'to hum'
č̣anč̣ən QI	'to tinkle (bell)'

It is also found in the following pair of synonymous doublets, both of which express a high pitched soft sound:

p̂aṱp̂əṱ QI	'to whisper'
p̂ač̣p̂əč̣ QI	'to whisper'

In C. Urmi the adjective *šap̂ira* 'beautiful' has a non-etymological unaspirated /p̂/ (< *šappīrā*), which is not found in most other NENA dialects, e.g. C. Barwar *šapira*. This may have developed by a similar process of diminutive sound symbolism,

in this case the diminutive being associated with endearment. As remarked above, diminutive and endearment are related concepts.

We should include here the anomalous occurrence of a tense /ṱ/ in the feminine ending of the adjective *sura*:

 surṱa   'small (fs.)'

There is no phonetic reason why the /t/ should become an unaspirated stop after the sonorant /r/. The motivation is undoubtedly diminutive sound symbolism. The initial /s/ in the adjective *sura* is the result of the devoicing of an original voiced *z* (< *zʿora*). This also is likely to have been motivated by a sound symbolism, whereby the pitch of the consonant was raised in the form of a strident sibilant. Finally it is probably not by chance that this word is plain, symbolizing smallness, whereas the word for 'big', ⁺*ɉura* (< *gaḇrā*), which has the same pattern and also contains an /r/, is emphatic.

In pairs of verbs containing sibilants of closely related phonological form that express sounds, the member of the pair that has an unvoiced sibilant /s/ expresses a higher pitched sound than a corresponding form with voiced /z/, e.g.

 ⁺*vasvəs* QI   'to squeak (mouse)'
 ⁺*vazvəz* QI   'to buzz (bee)'

 sarsər QI   'to scream shrilly'
 ⁺*zarzər* QI   'to utter a loud harsh cry, to bray (donkey)'

The affrication of an original unvoiced /ṱ/ in verbs with an emphatic suprasegmental setting has the effect of expressing a greater degree of force or hardness. It is noteworthy that affrication in plain words, by contrast, is an ideophonic expression of a diminutive. Examples of emphatic /č̣/ expressing greater force is seen clearly in a number of doublets where in one verb of the pair the /ṱ/ has been preserved while in the other it has shifted to /č̣/, e.g.

 ⁺*ṱaxṱəx* QI 'to pound'
 ⁺*č̣axč̣əx* QI 'to smash to pieces'

 ⁺*xarxəṱ* QI 'to gnaw'
 ⁺*xarxəč̣* QI 'to gnash (teeth)'

 ⁺*ḵaṱṱə* I 'to cut'

⁺ḳačč̣ə	I	'to pull off (with greater force)
⁺zarəṯ	I	'to score (a board)'
⁺zarəč̣	I	'to scratch (with nails and break skin)'
⁺ḳaməṯ	I	'to twist, to tighten (rope); to squeeze'
⁺ḳaməč̣	I	'to pinch, to nip'
⁺ḳarməṯ	QI	'to have stomach cramps'
⁺ḳarməč̣	QI	'to wrinkle, to crumple'

A similar sound symbolism is identifiable in the following doublets, in which the verb expressing the more forceful action is distinguished from the other member of the pair by being emphatic and exhibiting the affrication of the sibilant */s/* to */č̣/*:

baləs	I	'to bruise'
⁺baləč̣	I	'to crush, to mash (with fist)'

Affrication of stops and sibilants in emphatic settings have developed in a number of other verbs expressing forcefulness or hardness, e.g.

⁺č̣aləp	I	'to split, to cleave' < *ṣaləp (cf. Syriac ṣlap̄)
⁺marəč̣	I	'to squash' < *marəs (cf. Syriac mras)
⁺č̣ayəm	I	'to push closed (door)' < *ṭayəm (cf. Syriac ṭam)
⁺č̣aməč̣	I	'to wither' < *kaməš (cf. Syriac kmaš)

In the light of the foregoing discussion the following increasing scale of ideophonic strength of alveolars may be identified, the sounds to the left expressing greater forcefulness or magnitude than those to the right:

$$⁺č̣ > ⁺ṯ/⁺s > ṯ/s > č̣$$

2.0. DISTINCTION IN GENDER

In some NENA dialects sound symbolism is used in the expression of gender distinctions of nouns. This can be identified in the C. Barwar dialect in a series of pairs of nouns that are distinguished in form only by the presence of phonological

emphasis in one member of the pair. In C. Barwar emphasis is a feature of consonant segments (represented below by a lower dot diacritic) and is not suprasegmental as in C. Urmi. The crucial point is that when there is a gender distinction between the two members of such pairs, the plain member is feminine and the emphatic member is masculine (Khan 2008, 377), e.g.

bera f. 'well'	*beṛa* m. 'light'
pəqqa f. 'frog'	*p̣əqqa* m. 'crack'
čəčča f. 'breast'	*c̣ə̣čc̣a* m. 'sholder-blade'

This phenomenon can be related to the previous category of sound symbolism, in which lack or presence of phonological emphasis can be used to express differences in magnitude or force. In the case of gender distinctions, this difference in magnitude, which can be regarded as a prototypical distinguishing feature of the gender of animate entities, has become conventionalized as an expression of grammatical gender irrespective of animacy or physical size.

Conversely, grammatical gender in NENA has in some cases been conventionally associated with the size of entities irrespective of animacy. In many dialects, for example, a morphological feminine affix is used to express the diminutive of a noun. Examples from the C. Barwar dialect include (Khan 2008, 345–46):

ʾilana 'tree'	*ʾilanta* 'small tree'
čakala 'pruning hook'	*čakalta* 'small pruning hook'
čakuč 'hammer'	*čukučta* 'small hammer'
dapa 'plank'	*dapθa* 'small board'
dəprana 'juniper tree'	*dəpranta* 'small juninper tree'
garoma 'stone rolling pin'	*garomta* 'small stone rolling pin'
garuwa 'pile of twigs'	*garuta* 'small pile against a tree'
gəddiša 'pile of wood'	*gəddišta* 'stook (of corn or rice)

An association of grammatical gender with magnitude is also identifiable in the gender assigned to non-Semitic loanwords in some NENA dialects. Some languages in contact with NENA do not have grammatical gender distinctions in nouns. This applies to Sorani Kurdish, Persian and Turkish. Loanwords from these languages must, therefore, be assigned a grammatical gender within the NENA dialect. Such is the case, for example, with the loanwords from Sorani Kurdish and Persian in the Jewish NENA dialects of western Iran, such as Jewish Sanandaj (Khan 2009, 200–203).

In Jewish Sanandaj the majority of Kurdish and Persian loanwords referring to inanimate objects, body parts, small animals and flora are assigned to the feminine gender, e.g.

ʾotaxa f. (Pers.)	'room'
bayaquš f. (Kurd.)	'owl'
burtăqāl f. (Kurd./Pers.)	'orange'
čort f. (Pers,)	'abacus'
čuča f. (Kurd.)	'sweet pastry'
dasta f. (Kurd./Pers.)	'handle'
kuzi f. (Pers.)	'pot container for meat'
roxana f. (Pers.)	'river'

There is a residue of inanimate loans that are construed as masculine in gender. The gender assignment of these has been conditioned by magnitude, in that many of the nouns in question either denote long, thin entity or fabrics, which are typically long. Selected examples are given below (for further details see Khan 2009, 180–183):

(i) Long, Thin Entities

čin m. (Kurd.)	'lock of hair'
danda m. (Kurd.)	'rib'
darz m. (Kurd./Pers.)	'chink'
dăsa m. (Kurd.)	'handle'
dujka m. (Kurd.)	'tail'
klum m. (Kurd.)	'beam used to lock door'
lula m. (Pers.)	'pipe (for liquids)'
zanjir m. (Kurd./Pers.)	'chain'

(ii) Fabrics

farš m. (Pers. < Arab.)	'bedding'
grawa m. (Kurd.)	'sacking material'
ḥăṣir m. (Pers. < Arab.)	'mat'
jəns m. (Pers. < Arab.)	'material, stuff'
lăˤefa m. (Kurd.)	'quilt'
ləfka m. (Kurd.)	'loofa'
parča m. (Kurd.)	'cloth'

3.0. DISTINCTION OF GRAMMATICAL CATEGORY AND SYNTACTIC FUNCTION

In several NENA dialects there are homophonous pairs of words of different grammatical categories that are distinguished by the presence of phonological emphasis in one member of the pair. This is found in particular in homophonous pairs in which one member is a noun and the other is a verb. In all such cases it is the noun that has the emphasis.

In the C. Barwar dialect, for example, several pairs of homophones are found with the consonant /r/, which is pharyngealized in the noun of the pair (Khan 2008, 33, 59):

	Verb		Noun
dare	'he puts'	*daṛe*	'generations'
parma	'she cuts'	*paṛma*	'oak tree'
dwara	'threshing'	*dwaṛa*	'rest area for sheep'

In some cases the verb and the noun are clearly derived from the same historical root, e.g.

gawra	'she marries'	*gawṛa*	'man'

Similar distinctions are found in other dialects. In the C. Urmi dialect suprasegmental emphasis distinguish otherwise homophonous forms of verbs and nouns from the same historical root (Khan 2016 vol. 1, 130, 257), e.g.

ḳora	'she buries'	⁺*ḳora*	'grave'
ɟora	'she marries'	⁺*ɟora*	'husband'

Some kind of cogntive correlation between this type of ideophonic distinction and that of the previously considered categories involving phonological emphasis can be postulated. A noun typically denotes a time-stable, dense entity whereas a verb typically denotes a dynamic process. The former is correlated with magnitude and the latter with diminutiveness, i.e. heaviness vs. lightness.

Distinctions between grammatical categories is also reflected by different patterns of contraction of diphthongs in some NENA dialects. These applies to the C. Barwar dialect, from which all the following examples are taken (Khan 2008, 83–86). In this dialect the diphthong /aw/ generally does not contract in nouns, e.g.

gawṛa	'man'
tawra	'ox'
gawza	'wallnut'
qawra	'grave'

    kawda   'liver'

In a small set of nouns an original *aw is regularly contracted to /*o*/. These include the following:

    yoma   'day'   < *yawma
    gota   'side'   < *gawta < *gaḇta

The explanation for the regular contraction in these words may be linked to the syntactic context in which they typically occur. The words *yoma* 'day' and *gota* 'side' typically occur in phrases that have adverbial function, temporal or spatial respectively, and so the contraction reflects their grammatical category of adverbs, e.g.

(1)   *šə́ryela gu-d-ɛ́ ʾotél ʾo-yòma* 'They stayed in that hotel that day' (Khan 2008, A2:2)

(2)   *yóma mən-duzúθa qìdle bέθa*ˈ 'One day the house really burnt' (Khan 2008, A17:5)

(3)   *ʾárya hóle l-xà-gota*ˈ *ʾu-nə́mra xà-gota*ˈ 'The lion was on one side and the tiger on the other side' (Khan 2008, A27:21)

(4)   *xa-pə́čča píša l-ày-gota,*ˈ *xa-l-ày-gota*ˈ 'A piece remained on that side and one on the other side' (Khan 2008, A51:18)

The relevance of grammatical category for contraction is also demonstrated by the word *šawpa* 'place, trace', since the diphthong /*aw*/ in this word is generally contracted when it is used with an adverbial function, e.g.

(5)   *de-puš-šòpux!*ˈ 'Stay in your place (where you are)' (Khan 2008, A14:20)

(6)   *ʾáwwa píšle málka šópət bábe dìye*ˈ 'He became king in place of his father' (Khan 2008, A12:70).

    Contraction of /*aw*/ regularly occurs in adjectives, e.g.

    goṛa   'big'   < *gaḇrā
    kopa   'low'   < *kawpā
    koma   'black'   < *kawmā

These words are of the same historical pattern as nouns such as *gawza* 'nut' and *gawṛa* 'man'. Indeed the word *goṛa* 'big' appears to be a doublet of *gawṛa* 'man', both being derived from *gaḇrā. Their different formal developments reflect their different grammatical categories, the contracted form being used when the word was used as

an adjective to express an attribute and the uncontracted form remaining when it was used as an entity term.

It is relevant to note that some compound nominal phrases also exhibit regular contraction of a diphthong in their second element, which has a functional status similar to that of attributive adjectives, e.g.

    bɛθ-qora   'cemetery'   cf. *qawra* 'grave'

    zaqra-qode   'spider' ('weaver of fetters')   cf. *qawda* 'fetter'

Differences in the pattern of contraction of the 3ms. demonstrative pronoun ꞌ*aw* can likewise be correlated with syntactic function. In principle its contraction to ꞌ*o* is restricted to cases where it functions as an attributive pronoun. When it functions as an independent pronoun it regularly remains uncontracted. This is illustrated in the following examples, in which the pronoun is in all cases unstressed:

    ꞌ*aw-mɛ̀re*   'he said' (A23:19)

    ꞌ*aw-tíwɛle xaràya*   'he sat down last' (A17:31)

    ꞌ*aw-gàrele*   'that is the roof' (A23:14)

    ꞌ*o-tắra*   'that door' (A17:20)

    ꞌ*o-tèla*   'that fox' (A20:1)

    ꞌ*o-ꞌixàla*   'that food' (A21:19)

Strong, uncontracted diphthongs are, therefore, correlated ideophonically with nouns and independent pronouns, whereas the weaker contracted diphthongs are correlated with dependent adjectives, adverbs or demonstrative determiners.

4.0. DISTINCTIONS IN DEIXIS

In some NENA dialects phonological emphasis (pharyngealization) is applied to the vowels of deictic pronouns that are used to point to something that is distant from the interlocutors. This is marked by an underscript dot in the following paradigms:

	Near deixis	Far deixis
J. Amedia	ꞌ*ayya* (ms.)	ꞌ*awạḥạ*
	ꞌ*ayya* (fs.)	ꞌ*ayạḥạ*
	ꞌ*anna* (pl.)	ꞌ*anạḥạ*
C. Barəṭle	ꞌ*aða* (ms.)	ꞌ*ạwa*
	ꞌ*aði* (fs.)	ꞌ*ạya*

        ʾanni (pl.)   ʾạne

The muscular tension and strength of the pharyngealization is correlated with the magnitude of the distance from the speech situation.

In some dialects the distance of the deixis of a far deixis pronoun is increased by increasing the muscular tension either by glottalizing the stressed vowel, e.g.

C. Barwar

ʾăwắha ms. 'that' (far)   ʾăwắʾha ms. 'that' (very far)

or by strengthening a laryngeal consonant to a pharyngeal, e.g.

C. Peshabur (Coghill 2008, 97–98) and C. Qarawilla:

ʾăwắha ms. 'that' (far)   ʾăwắḥa ms. 'that' (very far)

In C. Peshabur and C. Qarawilla the deictic distance may be increased still further by glottalizing or increasing the duration of the stressed vowel of the form ʾăwắḥa:

ʾăwắʾḥa, ʾăwắaḥa ms. 'that' (extremely very far)

5.0. Constellations of Words with Shared Meaning

In the preceding sections we have been concerned with the role sound symbolism has played in bringing about phonological changes. Sound symbolism also conditions the development of groups of words with a shared phonological feature that corresponds to a shared semantic feature. Many groups of verbs exhibiting sound symbolism are reduplicative quadriliterals, as can be seen in the following examples.

The sound –x is found at the end of several verbs expressing heavy impact. In reduplicative quadriliteral verbs this occurs at the end of each syllable:

     ⁺čaxčəx QI   'to smash'
     ⁺ṱaxṱəx QI   'to crush, to pound'
    pampəx QI   'to break up (ground)'
     ⁺p̂aṱəx I   'to spread by pressing on sth.'
     ⁺ṱavəx I   'to crush, to break to pieces'
     ⁺ṱap̂əx I   'to smash'
    ḵaməx I   'to be crushed, to be flattened (corn)'
    ḵarpəx QI   'to bang on the head; to shock'
     ⁺č̣albəx QI   'to beat with a stick'

ɟambəx QI   'to cave in; to cause to cave in'

A final -ḵ occurs in several verbs expressing a lighter impact, e.g.

⁺taḵtəḵ QI   'to knock (at the door)'

daḵdəḵ QI   'to chop finely'

laḵləḵ QI   'to loosen (tr. and intr.) by banging'

šarpəḵ QI   'to crack'

šaḵšəḵ QI   'to clatter, to rattle'

Final -ḵ occurs also in verbs expressing vibrations or vibrating noises, e.g.

čaḵčəḵ QI   'to rattle; to chatter (teeth)'

⁺zaḵzəḵ QI   'to shiver (from cold)'

zaḵzəḵ QI   'to throb (with pain)'

baḵbəḵ QI   'to bubble'

vaḵvəḵ QI   'to quack (duck)'

naḵnəḵ QI   'to stammer'

The sound –x or –h is found at the end of several non-emphatic verbs expressing 'panting' or 'heavy breathing'. In reduplicative quadriliteral verbs this occurs at the end of each syllable, e.g.

laxləx QI   'to pant (dog when thirsty)'

naxnəx QI   'to pant'

lahləh QI   'to puff, to pant'

napəx I   'to blow, to pant, to breathe'

Final –s or –š is also found in verbs expressing 'heavy breathing', 'hissing' or 'hissing-like' noises, e.g.

⁺xasxəs QI   'to breathe heavily'

⁺paspəs QI   'to breathe hard; to wheeze'

tarxəs QI   'to pant'

⁺vasvəs QI   'to squeak (mouse); to hiss'

⁺pašpəš QI   'to hiss'

xašxəš QI   'to rustle (leaves), to hiss'

Several verbs expressing disgust or complaint end in –z, e.g.

lazləz QI	'to feel disgust'
zaləz II	'to feel disgust'
ɟanɟəz QI	'to show disgust'
ɟazɟəz QI	'to whine'
⁺*naznəz* QI	'to whine'

Several reduplicative quadriliteral verbs with syllables beginning with an unvoiced dorsal and ending in a voiced sibilant express 'sputtering', 'sizzling', or related noises, e.g.

čazčəz QI	'to sputter, to sizzle' (meat in a frying pan)
cazcəz QI	'to splutter'
ḵažḵəž QI	'to sizzle, to rattle (rain)'

Several verbs expressing sustained sounds end in–*r*, e.g.

xarxər QI	'to snore'
⁺*marmər* QI	'to growl'
⁺*xanzər* QI	'to growl threateningly'
čarčər QI	'to scream'
sarsər QI	'to hiss'

Initial *n*- is found in verbs expressing nasal sounds, e.g.

⁺*namnəm* QI	'to speak through one's nose'
⁺*narnər* QI	'to bellow (buffalo)'
⁺*naznəz* QI	'to whine (child)'

Initial *l*- is found in verbs expressing actions with the tongue:

lacəx I	'to lick; to lick up'
laḵə I	'to lap up, to guzzle'
lapə I	'to lap up, to gobble up'

Some verbal roots of related meaning share two radicals, or sometimes three radicals in the case of quadriliteral verbs. These may be consecutive or discontinuous (i.e. separated by other radicals), e.g.

| *xarbəs* QI | 'to push, to urge (a person)' |
| *xarzəp* QI | 'to push; to push over (a person)' |

balləs QI   'to chew (with mouth closed)'
⁺*lasləs* QI   'to chew (with mouth open)'

⁺*zarəč̣* I   'to scratch'
⁺*ɟarəč̣* I   'to scratch'

jarəp I   'to slip (on ground, ice)'
⁺*jarət̯* I   'to stumble, to slip (from a height)'
⁺*šaršət̯* QI   'to slide'

zaləx̣ I   'to rip, to tear apart'
zaləp I   'to rip, to tear (a piece from clothes)'
zanbəl QI   'to rip, to tear (into strips)'

⁺*bambəl* QI   'to stagger'
čambəl QI   'to hang (forwards), to sag'
ɟambəl QI   'to tumble, to stumble'
ɟambəx QI   'to cave in'

marəx̣ I   'to suck strongly with lips; to suck out'
šarəx̣ I   'to suck (especially a whole egg)'

⁺*laməs* I   'to absorb'
⁺*mayəs* I   'to suck'

⁺*ḳarməč̣* QI   'to crumple'
⁺*ḳarmət̯* QI   'to have stomach cramps'
⁺*ḳarnəz* QI   'to coil up'

nacnəc QI   'to groan'
nax̣nəx̣ QI   'to grunt, to grumble'
naxnəx QI   'to pant'

R‍EFERENCES

Bolinger, Dwight. 1965. *Forms of English*. Tokyo: Hokuou.

Childs, Tucker. 2014. "Sound Symbolism." In *The Oxford Handbook of the Word*, edited by John. R. Taylor. Oxford: Oxford University Press.

Chirikba. 2008. "The Problem of the Caucasian Sprachbund." In *From Linguistic Areas to Areal Linguistics*, edited by Pieter Muysken, 25–94. Amsterdam-Philadelphia: John Benjamins Publishing.

Coghill, Eleanor. 2008. "Some Notable Features in North-Eastern Neo-Aramaic Dialects of Iraq." In *Neo-Aramaic Dialect Studies*, edited by Geoffrey Khan, 91–104. Piscataway: Gorgias.

Haiman, John. 2018. *Ideophones and the Evolution of Language*. Cambridge: Cambridge University Press.

Khan, Geoffrey. 2008. *The Neo-Aramaic Dialect of Barwar*. Leiden: Brill.

———. 2009. *The Jewish Neo-Aramaic Dialect of Sanandaj*. Piscataway, NJ: Gorgias Press.

———. 2016. *The Neo-Aramaic Dialect of the Assyrian Christians of Urmi*. 4 vols. Leiden-Boston: Brill.

Nichols, Johanna. 1971. "Diminutive Consonant Symbolism in Western North America." *Language* 47 (4): 826–48. https://doi.org/10.2307/412159.

Reay, I. E. 2006. "Sound Symbolism." *Encyclopedia of Language and Linguistics*. Maryland Heights: Elsevier.

Voeltz, Erhard Friedrich Karl, 1943-, and Christa Kilian-Hatz, eds. 2001. *Ideophones*. Typological Studies in Language 44. Amsterdam-Philadelphia: Benjamins.