

ON THE INTERRELATION OF RHYTHM AND PHRASAL ACCENT: A CONTRASTIVE STUDY

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ABSTRACT

The article summarizes a study of phrasal stress in Armenian and English. The characteristics concern the effect of the grammatical factor on accentuation through auditory and acoustic clues. The analyzed issue is directly related to the problems of the rhythmic structure of languages.

It is an attempt to explore and model a formal criterion for the analysis of rhythmic stereotype of languages. The comparison reveals peculiarities that pass unnoticed in monolingual investigation.

Keywords: Armenian vs. English phrasal accent, form word, contrastive study, quantitative index

1. INTRODUCTION

Phrasal stress gained considerable attention in nearly all linguistic subdisciplines which provide their own explanations to the problem of phrasal stress, its types, its degrees and typological characteristics. The insight into the problems of phrasal stress unmistakably draws into question the issue of rhythm as specific realization of phrasal stress and determines the rhythmic stereotype of the language. Accent or phrasal stress distinguishes lexical, logical and grammatical aspects. Present study focuses on the grammatical approach which is based on the assumption that notion words attract phrasal stress, while form words tend to be unaccented. Though the principle claims universality, it still admits certain degree of interlanguage variation. In Russian, for example, certain classes of form words such as personal and relative pronouns or auxiliaries may be under stress, as opposed to their English counterparts.

Precondition to present study served the auditory intuition of native speakers about certain degree of prominence being attached to form words, also the lack of any experimental and/ or contrastive study on the interaction of the grammatical and acoustic parametrical factors.

2. MATERIAL AND METHOD

The experiment encompassed acoustic analysis of phrasal accent in the languages under study which was implemented in two stages. The first stage was designed to provide a deeper insight into accentuation of all types of form words embedded in isolated sentences. The second stage aimed at revealing the accentual status of parts of speech on the textual level. The corpus was based on recordings of four academic texts read by four native speakers of Standard Eastern Armenian and Standard English. In general the corpus contained 550 sentences. The variable parameters influencing the presence/absence of phrasal accent such as tempo and information structure of the sentence were considered.

3. RESULTS ON CONTRASTIVE STUDY

3.1. The First stage

The initial stage involved the analysis of the accentual status of form words and its frequency distribution considering the quantitative factor, the number of syllables, their incidence. This was followed by the study of intralanguage variation of their accentual status of form words/notional words in the languages analysed. The latter is better reflected in the reproduction of identical texts. The recording was digitized and analyzed by Praat 4.4.20. Stressed syllables were determined on the basis of auditory analysis and salience of acoustic parameters. Form words were grouped according to type, number of syllables, degree of prominence. Interspeaker variation of the accentual structure of phrases in Armenian measured by Anova was insignificant: $F=0.5$, $p=0.98$ as regards primarily stressed form words, $F=0.75$, $p=0.52$ in the case of secondarily stressed form words and $F=1.17$, $p=0.31$ between that of unstressed form words. The unstressed words of monosyllabic and disyllabic structure display a slight tendency to intralanguage variation being stressed in the reproduction of one or two speakers and unstressed

or partially stressed in the rest of cases: *depi' kaghak* (1) – *depi kagha'k* – to town (3), the form word *depi* is stressed in one reproduction and unstressed in the other three. The variation between primarily stressed form words is relatively

low due to the accentual stability of disyllabic and trisyllabic form words. However, interspeaker variation is insignificant and the results for each speaker can be averaged.

Table 1: Distribution of prepositions, postpositions, conjunctions and pronouns according to type and degree of accent.

Degree of stress	Prepositions			Postpositions			Subordinative conjunctions			Coordinative conjunctions			Personal pronouns			Demonstrative pronouns		
	Primary	Secondary	Unstressed	Primary	Secondary	Unstressed	Primary	Secondary	Unstressed	Primary	Secondary	Unstressed	Primary	Secondary	Unstressed	Primary	Secondary	Unstressed
Monosyllabic	-	2	1	14	2	4	5	-	1	2	4	6	2	4	6	1	2	1
Disyllabic	16	3	6	19	2	4	6	2	-	3	1	-	4	-	-	-	-	-
Trisyllabic	8	-	1	12	-	-	5	1	-	2	1	-	5	-	-	-	-	1
Four-syllabic	-	-	-	5	-	-	2	-	-	2	-	-	-	-	-	-	-	-
Five-syllabic	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-

Conjunctions gradually range within the primarily stressed column. The difference between subordinative and coordinative types is a greater concentration of coordinative conjunctions (*vor-* to, *u-*and, *bajts-*but) with a weak accentual status as contrasted with subordinative ones.

Both types of conjunctions have a small proportion of secondarily stressed disyllabic and trisyllabic conjunctions. Polysyllabic personal pronouns usually bear phrasal accent unlike monosyllabic structures (*hi'ma du* – now you, *ir'krodz het* – her sister with). Demonstrative pronouns are either secondarily stressed or unstressed (*ajs t'fana'parə* – this road). Reflexive pronouns which are mostly di- or polysyllabic tend to be primarily stressed. Almost all of the defining and indefinite pronouns are stressed being mostly polysyllabic. Relative-interrogative pronouns also bear stress.

As for the prepositions they mostly fall into disyllabic and trisyllabic groups. A few monosyllabic preposition are either secondarily stressed or unstressed. According to their frequency the majority of prepositions are disyllabic having different degrees of stress.

As opposed to prepositions, postpositions are realized in primarily stressed disyllabic (*hamar* - for), monosyllabic (*vra* - on, *durs* - out) and polysyllabic structures (*hakarak* - against) in decreasing proportions. Secondarily stressed and unstressed monosyllabic postpositions (*patuha'ni mot* - by the window) quantitatively equal to

disyllabic ones (*vorsordu'tjan masin* – about chase). From the point of view of accentual salience postpositions display a tendency to a greater degree of prominence.

Figure 1: The third word is an accented postposition (*He never went out of the town*).

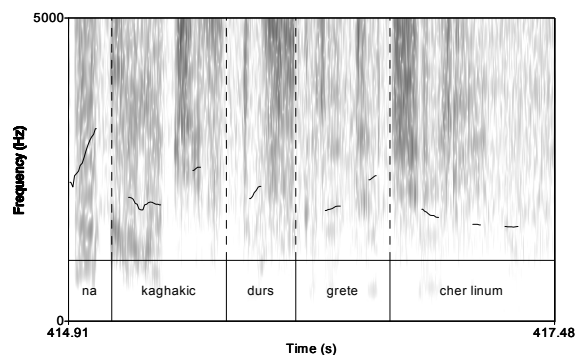
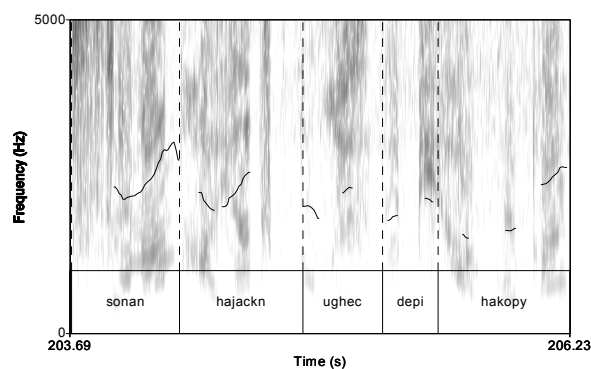


Figure 2: The fourth word is a secondarily stressed postposition in the phrase *Sona glanced at Hakob*.



As for the scale of the frequency of distribution the prepositions are predominantly distributed between disyllabic and trisyllabic structures, the occurrence of post-positions is equal in all the groups (*hamadzajn* – according).

In the *pronoun+preposition* combination the stress may fall on the first or second component: *a'jd masin* about it, *depi 'durs* – to outside.

3.2. The Second stage

The second stage of the experiment analyzes the accentual status of nearly all parts of speech and their frequency of their distribution with the view of establishing their “accentogenic” potential.

It reflects strong accentual status of nouns, verbs, adjectives, adverbs and numerals which are predominantly stressed. In *noun, adjective, numeral+noun* sequences both components of the phrase may receive primary stress or the accentual structure may be constituted by one primary and one secondary stress, example. In the *pronoun+noun* sequences the pronoun is unstressed or partially stressed, the tendency to the secondary stress of pronouns grows in proportion to the increasing number of syllables of noun or/and pronoun: *ajs hanga'mankə* – this circumstance. In *preposition+noun* combinations prepositions are frequently partially stressed.

Verbs are canonically stressed. Compound verbs can bear potential accent on the first or second component, however compound verbs with the stress on the first semantically more important component prevail: *at'ki en ənkel* – stood out. Numerals may have regular final stress or may be stressed on the first syllable; compound numerals can be stressed both on the first or second component forming one or two rhythmic groups.

Stressed pronouns constitute approximately 4% of all the rhythmic groups segmented in the analyzed texts. The average distribution of rhythmic groups of pronouns with different structures is 2, 2, 1% of the whole number of rhythmic groups in the texts. These are personal and demonstrative, with a smaller percentage of indefinite, defining and interrogative pronouns. Unstressed pronouns are mostly monosyllabic and occur in *pronoun+noun* combinations: *ir sanerin* – to his pupils (3% of the whole number of rhythmic groups on the textual plane). Pronouns tend to exert prosodic dominance over conjunctions and prepositions; *arants 'kez* –

without you. Rhythmic group consisting of prepositions, postpositions and conjunctions is 1-3%, disyllabic groups dominating over the rest: *'jurdzə* – around.

Unstressed conjunctions, prepositions and postpositions which very often combine with nouns constitute about 4% of the whole number of rhythmic units and are monosyllabic: *vor ekra'num* – that in the screen.

As for the frequency of distribution of syllabic structures in the Armenian language the most frequent syllabic structures are disyllabic, trisyllabic, and four-syllabic structures.

3.3. Contrastive Study

The contrastive study proved that the quantitative index of stressed and unstressed words of the Armenian language concedes to that of English in the frequency of distribution. If phrasal stress on the average marks every second syllable in English, in Armenian it marks every third syllable. Conformably the greater part of syntagms in Armenian has a 9+2 syllable structure and is marked 2-3 accents, the results concerning English prove the existing data that is 7+2 syllables and the most frequent accentual structure bears from 1 to 4 accented syllables. This interlanguage variation is displayed against a universal background – identical number of total syllables in the intonation group (1-15) and a similar distribution of phrasal accents in both languages (2-3 accents in an intonation group).

As for the grammatical factor it works in the following way: in English notion words tend to get stressed, except for the cases when their semantic weight is low. Nouns like “people, thing, man, matter” and similar empty words occur with a secondary stress when accompanied by an attribute. Similarly, Armenian nouns are usually stressed, however in *noun, adjective, numeral+noun* combinations the accent of the second component is weak. In both languages adjectives are stressed except for English words “little, young, old”. English verbs are stressed with the exception of ‘empty verbs’ like *get, make, put* and *verb+infinitive combinations*; these receive a secondary stress. Negative forms of auxiliaries in short answers bear accent in English. In both languages compound verbs bear two stresses unless one of the components become dominating under the influence of semantic or rhythmic factors.

The accentual status of adverbs is similar both in English and Armenian. The strong accentual position of adverbs in Armenian was mentioned in previous studies [3]. In English accentual salience of adverbs may be reduced due to the rhythmic factor. Adverbs in Armenian are stressed, their strong accentual position was mentioned in previous studies [1].

As for the form words, demonstrative pronouns as a rule bear strong stress in the function of a subject in both languages unless they are in the position of an attribute. In the latter case they bear either secondary stress or are unstressed. Interrogative pronouns are stressed both in English and Armenian due to semantic weight being attached to them.

Personal and relative pronouns are unstressed in English. In Armenian a greater part of monosyllabic personal and relative pronouns is unstressed, however in a limited number of cases they can also bear secondary stress and in a few instances they appear without an accent.

Defining, indefinite and reflexive pronouns are unstressed in English. Contrary to it in Armenian almost all of them are stressed due to their polysyllabic structure.

Armenian lacks monosyllabic prepositions, most of them are disyllabic and accented, a small proportion of them is accentually weak. The accentual status of prepositions is weak in English. However prepositions are stressed at the end of the sentence. Some monosyllabic prepositions in English may bear a nuclear accent in the speech of people with a proficient knowledge of the language. Postpositions, which are non-existent in English, are primarily stressed.

Conjunctions are as a rule unstressed in English, while in Armenian they are primarily stressed with the exception of a small proportion of secondarily stressed polysyllabic conjunctions and some unstressed monosyllabic coordinating conjunctions. English disyllabic form words are mostly marked by an accent (*before, after, until, oneself*).

It infers from the all said above that form words are also apt to be stressed in connection with their structure.

4. CONCLUSION

The study is an attempt to reveal typological realization of phrasal stress in English and Armenian. Assuming some universal basis of

phrasal accent the study draws a parallel between the languages under comparison and reveals high proportion of accented words in Armenian as contrasted with English. The former is strongly expressed in the accentuation of subordinative conjunctions and postpositions, in a lesser extend in personal and demonstrative pronouns and coordinating conjunctions. Present study of phrasal accent can be projected to contrastive investigations of rhythm. It also paves way to the formal quantitative criteria of the interrelation of phrasal accent and rhythm.

5. REFERENCES

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