

PROSODIC INTERFERENCE: A TYPOLOGICAL APPROACH

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ABSTRACT

The interaction of prosodic systems in a bilingual's speech reveals itself in minimal prosodic units (tonemes, accentemes, chronemes, rhythmemes) and in their structural complexes, or "phonological syntagms" (tonal contours, accentual, temporal and rhythmic structures). As the actual relations between the units of the languages in contact are set by a bilingual speaker according to the laws of interlanguage identification, the character of these relations determines types of interference on the paradigmatic plane (underdifferentiation, overdifferentiation, substitution) and on the syntagmatic plane (intercatenation, plus-segmentation, minus-segmentation, permutation).

INTRODUCTION

Prosodic interference is defined as changes in the realization of the prosodic system of the non-native, second language (L₂) that emerge under the influence of the native language (L₁), and manifest themselves in a bilingual's speech as deviations from the norm of L₂. Topicality of problems of prosodic interference for language theory and applied linguistics has widened the range of experimental phonetic investigations in spite of the lack of knowledge on prosody as linguistic phenomenon and despite the difficulties of contrastive prosodic analysis aimed at revealing areas of potential interference in a bilingual's speech. Investigations are carried out predominantly on the level of the utterance (intonation group) in terms of perceptual and acoustic features, pertaining to the prosodic structure of an utterance as a whole and to its separate elements - pre-head, head, nucleus and tail. The features of prosodic interference (deviations, errors) are analysed as to

their frequency, stability, communicative relevance as well as to their occurrence in different types of utterances and prosodic subsystems.

The typology of prosodic interference bases on the character of actual relations between the elements of the two languages as they are set by a bilingual speaker according to the laws of interlanguage identification has not as yet been touched upon. The solution of this significant linguistic problem requires the description and classification of the prosodic units of the languages in contact. But what units does the prosodic system comprise? The question, as we know, is a point of discord between linguists and an attempt is made here to give our interpretation of the units of a prosodic system.

TYPES OF PROSODIC UNITS

In view of the polycomponential and polyfunctional nature of prosody it seems logical to admit objective existence of essentially heterogenous prosodic units, forming relatively autonomous but interconnected and interpenetrating subsystems - temporal, accentual, rhythmical and tonal. Each of the subsystems contains units of two types - microprosodemes (minimal prosodic units) and macroprosodemes (structural complexes of microprosodemes, "phonological syntagms"). The first type includes syllablechronemes, accentemes, rhythmemes, tonemes (functional types of syllable duration, accents, rhythmic units, tones). The second type is represented by temporal, accentual, rhythmic and tonal structures which function as integrative units, as patterns of syntagmatic (phonotactic) organization of microprosodemes. Each structural complex is at the same time a paradigmatic unit when opposed to other structural complexes of the subsystem. The units of both types are phonological units, if phonology is viewed in the broad sense including (i) segmental and suprasegmental units, (ii) elementary

units and "phonological syntagms", (iii) units that perform a distinctive function and those that have no such function in the language but fulfil the constitutive (integrative) and identificatory functions. In the functioning of prosody as one whole the structural correlation of the toneme, accenteme and chroneme as systemic elements provides their close interconnection and interaction in complex polycomponential units - micro- and macroprosodemes of an utterance. Ontologically, prosodemes as invariants exist in classes of their variants (alloprosodemes) as the general in the particular. And since the prosodeme, unlike the phoneme, is a sign, the invariability of the prosodeme is inherent in both its aspects - form and content. The invariant of the prosodic form is its material essence (its constant phonetic features) and the invariant of the content is a generalized denotational meaning. Thus, the rising toneme has a rising direction of pitch movement as its invariable formal feature and its denotational (logical-modal, or intellective) meaning of indefiniteness, non-finality, incompleteness is its semantic invariant, which in its turn is conveyed, irrespective of the context, by all the functional and structural variants of the toneme and is realized as categorial meaning of the communicative type of an utterance. Variants of the toneme as to its form are marked by configurational and pitch-level varieties of its allotones (tone types); whereas its variants as to the content are distinguished by subjective-modal (emotive, attitudinal) connotations realized as different situational (or stylistic) and pragmatic meanings of an utterance. The number of prosodic variants is conditioned by the system which regulates their (i) positional, combinatory and structural distribution within a polycomponential macroprosodeme (phonological syntagm), the variants being closely interconnected with the phonemic structure of the speech segment, and (ii) semantic-functional distribution, determined by the polysemantic nature of prosodemes on the one hand, and by their interaction with the units of lexical and grammatical subsystems of the language, on the other. The system specifies the areas of realization of prosodemes and limits their variation. On the whole the prosodic system, as any other system, stipulates the norms of its functioning. In spite of the fact that prosody is to a great extent universal in its categories, languages differ one from another in the number and character of their prosodemes, in the frequency and sphere of their functioning, as well as in the number, distribution and acoustic-percep-

tual peculiarities of their variants. All that provides the basis for interference, i.e. variations in the form and character of functioning of prosodemes which do not conform to the norms of the second language. In the study of Byelorussian-English, Byelorussian-Russian, Russian-English and other types of interference /1,2,3,4,5/ contrastive experimental analyses of prosodic norms of the languages in contact that preceded error analysis made it possible to establish the inventory of units of the tonal, accentual, temporal and rhythmic subsystems of the languages and as a result to approach the description of prosodic interference in terms of systemic units. An attempt was made to determine types of prosodic interference on the basis of peculiarities of the influence of L₁ upon L₂ in the sphere of paradigmatic and syntagmatic relations between prosodic units /1/.

TYPES OF PROSODIC INTERFERENCE

The interaction of prosodic systems in a bilingual's speech takes place on the level of minimal prosodic units and on the level of phonological syntagms. In the latter cases the interference of the native language system in the syntagmatic organization of the microprosodemes within the structures is more expressed than in the features pertaining to the structure as a whole /1,2/.

Types of paradigmatic interference, as is well known, are determined by the differences in the number and character of prosodic units, by their semantic-and-functional differences in the languages under consideration.

The unequal number of prosodemes in the two languages provides a basis for underdifferentiation or overdifferentiation of some of them by a bilingual speaker. Thus, in the English speech of Russians there occurs underdifferentiation of English rising and falling-rising tonemes, the latter being absent in the system of the Russian language. But in the Russian speech of Englishmen there often appears overdifferentiation of the Russian rising toneme: the structural variants ✓ of its level-rising ✓ allotone is identified by Englishmen as the falling-rising toneme. It should be noted, however, that due to the universal nature of the majority of prosodic units the above-mentioned types of paradigmatic interference are not frequent.

A more widespread type of paradigmatic interference is substitution. It is a result of language distinctions in the character of prosodemes and the sphere of their functioning, as well as distinctions in the frequency of occurrence of the alloprosodemes that represent them. The following deviations in the English

speech of Byelorussians and Russians illustrate substitution in all the subsystems of prosody: 1) the use of the rising toneme in non-final intonation groups instead of the falling toneme and vice-versa, the use of the falling toneme instead of the rising one in requests, apologies, contradictions; 2) the substitution of the English rising toneme for the corresponding Russian toneme in particular, the use of the rising-falling allotoneme which is more frequent in Russian instead of the more frequent English level-rising allotoneme; 3) the use of the Byelorussian rising toneme (its level-rising allotoneme in particular) instead of the English falling-rising toneme in general questions; 4) the use of strong accentemes instead of weak ones due to a greater number of strong (full) accents in Russian and Byelorussian utterances as there is a greater number of notion words in them and some classes of words (personal and possessive pronouns, modal verbs etc.) attract accent more often than in English and the role of the semantic and grammatical factors of accentuation is greater, whereas in English the rhythmic factor is the main regulator of accents; 5) substitution of accentual and temporal structures of rhythmic units, tonal contour substitution; 6) substitutions of the accentemes (nuclear and non-nuclear) of L2 for the corresponding accentemes of L1, substitution of syllable chronemes, the use of configurational and pitch-level allotonemes of L1 instead of the functionally similar allotonemes of L2. Underdifferentiation and overdifferentiation, as well as substitution of functionally different prosodic units (points 1-5) belong to communicatively relevant semantic interference, i.e. display both formal and semantic-functional non-standard variation of prosodemes and alloprosodemes. Within communicatively relevant prosodic interference two subtypes are distinguished: modal (emotive) and stylistic. Substitution of units, which are functionally identical but qualitatively different (point 6) belongs to communicatively irrelevant interference; such substitution signals formal-structural non-standard variation only. The above-mentioned types of interference are deviations from the norms of prosodic unit choice which occur when the communicative-pragmatic message is actualized in various speech situations. Syntagmatic interference is represented by the deviations in the combinability of microprosodemes within structural complexes (macroprosodemes), on the one hand, and by the inadequate realization of microprosodemes as certain positional and combinatory variants, on the other. One type of syntagmatic interference is

intercatenation of microprosodemes of L2 according to the structural pattern of L1, resulting in a new structural pattern, which does not exist in L2, e.g. inadequate combination of the sliding (or heterogeneous) head with the high rising toneme in the contour of English general questions, pronounced by Byelorussian speakers of English. Another type is minus-segmentation, or elision of elements in the structure, e.g. the omission of prehead or tail in English utterances of Byelorussian-English bilinguals due to an increased number of accents or shift of accents. Wherefore plus-segmentation, or increase of elements in the structure as, for instance, in cases when the prehead and tail appear in the structure of an utterance is due to the reduced number of accents. The three types are deviations from the structural norms of the functioning system and belong to communicatively relevant interference. Closely connected with these types are deviations from the norms of realization of L2 units. The latter are conditioned by language distinctions in the acoustic areas of the units. Thus realization of syllablechronemes of L2 which are functionally identical to L1 chronemes differ in utterances of Byelorussian-Russian (B-R) and Byelorussian-English (B-E) bilinguals. Initial unaccented syllables and the 1st fully accented syllable in B-E and R-E are longer than in standard English realizations (SE), the tempo of pronunciation being identical. The 2nd accented syllable and the unaccented syllables of the head are characterized by approximate isochrony in B-E, whereas the nuclear and post-nuclear syllables are drawn in comparison with the temporal standard of Russian (SR) and English (SE). All that leads to inadequate realizations of temporal structures of L2. Distortions in the norms of realization are well marked in R-E and B-E utterances of identical tonal contour. F₀ intervals between the elements of the contour are not as evident as in SE. Prehead and head (its 1st accented syllable) have lower F₀ level in R-E and B-E than in SE. F₀ interval of the gradually descending head is wider in R-E and B-E due to the lowering of F₀ level on the 2nd accentual unit. Interference in the realization of English falling toneme is marked in B-E by the lower initial F₀ level and higher final F₀ level than in SE. Realizations of level-rising allotonemes in B-E are characterized by their higher initial and lower final F₀ levels and, consequently, by a narrower F₀ interval than in SE. In the realization of utterance accentemes in B-E and R-E /2,3/ syllable prominence is achieved by different combinations of acoustic parameters. The acoustic

contrasts of unaccented and accented syllables are less clearly marked in R-E, and especially in B-E realizations as compared to SE. The distortions of the norm as to differences in the distribution of phonetic features of prosodic units are termed permutational interference. The study of prosodic interference in various types of natural and "classroom" bilingualism /5/ reveals typologically common features of interference, which are characteristic of kindred and structurally similar languages and specific features, characteristic of the speakers of only one language. Some of the typologically common features are as follows: (i) a higher final F₀ level of the falling toneme in the English and German speech of Russians and Byelorussians and, consequently, a lower final F₀ level of the falling toneme in Russian spoken by Englishmen and Germans; (ii) a lower F₀ level of the tonal contour of English and German utterances in R-E, B-E, R-G and B-G as compared to SE and SG realizations; (iii) drawled initial syllables (accented and unaccented) in B-E and B-G utterances as compared to their standard realizations. Specific features of interference in particular types of bilingualism are (i) greater I contrasts between accented and unaccented syllables in R-E as compared to B-E; (ii) the absence of reduction in unaccented syllables in B-E; (iii) rhythm in B-E which tends to be syllable-timed. In the cases of reverse language domination in the same types of bilingualism prosodic changes have an opposite direction. There should also be mentioned universal deviations such as slowing down of the tempo of utterance, increase in the number of accents, rhythmic distortions etc. which can be observed at the early stages of any type of bilingualism.

CONCLUSION

Description of prosodic interference as a linguistic phenomenon in terms of systemic units of prosody extends our general knowledge of phonological interference /6/ and makes it possible to model the so-called "interlingua" at different stages of bilingualism which is important for the theory of language contacts and for practical application in teaching a second language.

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