МОЗАИКА СЛОВЕСНОГО УДАРЕНИЯ В ГЛОБАЛЬНОМ АНГЛИЙСКОМ: ВАРИАТИВНОСТЬ ПОСТАНОВКИ И ВОСПРИЯТИЯ

Научная статья

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Аннотация

В статье рассматривается специфика постановки словесного удара в странах трех концентрических кругов. Качеру. По данным словарей и корпусных исследований английского языка в странах «внутреннего круга», основные различия в постановке словесного удара между американским и британским стандартами (2,5% многосложных слов) находят свое отражение и в произносительных нормах Канады, Австралии и Новой Зеландии (примерно 24% лексикона). Для американского английского характерна ямбическая модель удара в двусложных словах, в то время как британские употребляются в 23,7% случаев. Для новозеландского произносительного стандарта характерно частое использование второстепенного ударения. Страны «внешнего круга», представленные регионами Южной Азии и Африки, имеют свою специфику, отличную друг от друга. Так, в индийском английском правила постановки словесного удара на 70% совпадают с нормами британского эталона, в 30% случаев сказывается влияние языков-субстратов. В английском языке Камеруна и Нигерии часто происходит сдвиг словесного удара в соответствии с рецессивной тенденцией. Особенности постановки удара в английском языке стран «расширяющегося круга» отличаются еще большим разнообразием, что подтверждается использованием тонов вместо ударения в китайском английском и преобладанием качественно-количественного удара в формантах английского языка.

Ключевые слова: английское словесное ударение, глобальный английский, языковые контакты, постановка удара, приемы выделения.

WORD STRESS MOSAIC OF GLOBAL ENGLISH: PLACEMENT AND PERCEPTION VARIANCE

Research article

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Abstract

The study presents an overview of word stress variation in global English, arranged according to Kachruvian circles. The “inner circle” description is based on dictionaries and corpus data. The main distinctions between American English and British English in stress placement (2.5% of polysyllabic words) are also reflected in Canadian, Australian and New Zealand varieties, supplemented in each case by identifying national features (around 24% of the lexicon). American English is noted for an iambic pattern in disyllables of French origin. Canadian English demonstrated a slightly higher percentage of American patterns than British (41.7 vs. 36.1%) and a number of original Canadian ones (22.2%), predominantly with secondary stresses. In Australian data British patterns are more common than American (46.6% vs. 29.7%), while specific Australian ones account for 23.7%. New Zealand variety developed a greater number of secondary stresses, whereas Australian English ignored most of them. In the “outer circle” indigenized varieties of South-Asian region, like India and Singapore, are distinct from African varieties in Cameroon and Nigeria. In educated Indian English patterns common with the British standard account for 70% of stresses, while 30% bear the traces of the substrata, being particularly quantity-sensitive. Cameroonian and Nigerian Englishes shift stress either following the recessive tendency without exceptions or the “forward” one. Apart from differences in stress placement speakers of New Englishes are characterized by their choice of prominence cues. The “expanding circle” is still more diverse, as is manifested by Mandarin Chinese English with tone replacing stress, and “Russian Englishes”, defined as possessing a quantitative-qualitative stress. Implications for intercultural communication are suggested.

Keywords: English word stress, global English, language contact, stress placement, prominence cues.

Introduction: language contacts’ effect

Social history and language/dialect contacts cause language change, and stress system, although it is a relatively stable part of phonology, changes with time as well. The French language impact starting from the XIX c. onwards, was most dramatic in history resulting in the “hybrid” nature of English lexicon with two competing tendencies: the recessive tendency, the Germanic rule, attracting stress to the initial root syllable and the Romance rule of counting from right to left, which together with the alternating rhythmic tendency produced new patterns with primary and secondary stresses.

The stress system of English is considered to be rather complex as there are other factors to be taken into account, namely, the morphological structure of the word (the retentive tendency in derivatives; affix-neutral and affix-attracting structures), word class (noun or verb), number of syllables. In the database “StressTyp2” which comprises 451 languages of the world, English is defined as “bound, quantity-sensitive, edge-sensitive, with predominant trochaic rhythm” [17]. Most of these features are realized in English world-wide but still the diversity of stress patterns and their distribution is immense, which is due to language contacts, viewed in historical perspective [3].
Inner circle

We could start with British English whose standard is canonized in pronunciation dictionaries. Recent studies gave new evidence of slow but constant development of the accentual norms in English [2], [10]. Thus, for instance, 81% of respondents in UK selected the stress on the second syllable in hospitable, while 19% still voted for hospitable. In American English the stress is still on the first syllable [23, P. 388].

Comparative analysis of British and American stress patterns based on dictionaries yielded 910 cases of primary stress differences which are estimated at 2.5% of polysyllabic words in the lexicon [8] and 1390 cases of both primary and secondary stress placement distinctions [3]. The deviant cases were described as low frequency words, French loans or proper names mainly, with stress on the second syllable in disyllables (tambic rhythm) in American English (57.4%): ba’llet, bu’ffet, ca’fe, Mo’net, which will correspond to the stress on the first syllable (trochaic rhythm) in British English (66.4%): ‘ballet, ‘buffet, ‘cafe. As the statistics shows, there are exceptions to these rules: American verbs finishing with —ate, for instance, have stress on the first syllable, just like the British ones: probate, deprecate. no’tate, fi’xate, do’name; note’ate, fi’xate, do’name. Verbs with affixes demonstrate both convergence and divergence of forms, with the former prevailing [5].

By applying the list of British-American deviant stress patterns (1390) in the overall analysis of stress patterns in Canadian, Australian and New Zealand national dictionaries, the relative share of either group was estimated. In Canadian English there is a slightly higher percentage of American patterns compared to British ones (41.7 vs. 36.1%), while in Australian English the British patterns come first (46.6% vs. 29.7%). Apart from the British and American patterns each variety developed specific national patterns, not to be found in either major variety. In Canadian English there are up to 22.2% and in Australian as many as 23.7% of nationally specific patterns. Typically, Canadian patterns have more secondary stresses: de’tail, ba’llet, frag’ment, gaso’line, parti’san [6]. In Australian English, there is an opposite tendency of ignoring secondary stresses, a feature quite unexpected in a long English word: semi’ colon, acade’mician, cinemato’graphic [1]. New Zealand, unlike the Australian variety, introduced more secondary stresses and made use of still smaller number of American patterns [4].

The following issues have to be raised in connection with the data presented above:
— the origin of deviant cases (innovations) in stress placement;
— the frequency of the words in which deviant patterns are registered.

The origin of British vs. American differences is traced back to the history of Romance borrowings which have preserved their stress patterns at the time when American standard was established in close contact with other languages and dialects of Europe. Canadian English patterns can be accounted for by the continuing contact with French, while New Zealand is widely attested to experience the impact of the Mayori language [4].

Concerning the frequency of occurrence of words with deviant patterns, it was claimed by the researchers [8], [3] that the words which were pronounced differently in UK and the USA are of very low frequency. However, anyone who could participate in the cross-dialectal communication had a chance of hearing such common words as detail, address, buffet, princess, secretary, research with varying stress patterns on the two sides of the Atlantic. When three national corpora were checked for the frequency of 1390 words, 79 words on the list proved to be of equal medium frequency in British, American and Canadian speech. That evidenced their functional value in the cross-dialectal communication [6].

Outer circle

In post-colonial varieties of English, based on contacts with South-Asian indigenized languages, there is a combination of features typical of the area and the dominant recessive tendency governed by native English. South-Asian languages are reported to be quantity-sensitive [16] and have no word stress in their phonological systems [13], though some authors may disagree on the point [18]. The point is that the recessive tendency is sometimes realized with no exceptions found in native English. Being quantity-sensitive, the South-Asian varieties shift the stress and place it on the syllable which is heavy (long vowel or diphthong, or vowel + consonant in coda) or extra-heavy (long vowel, diphthong and more than one consonant in coda). Another salient feature is absence of vowel quality reduction (though duration may be shorter) in unstressed syllables, which diminishes stressed/unstressed contrast and may cause failure to identify the word.

In Indian English stress falls on the first syllable in disyllables except when the second syllable is extra-heavy: tabo, mistake. In three-syllable words the stress also falls on the first syllable except when the second syllable is heavy: mo’desty, char’acter [16], [20]. But since many people ignore that rule, individual variations are plentiful. Although there is a great deal of similarity and systematicity in the English spoken by educated speakers of Indian English (4% of the population, which makes 50 million, are fluent speakers of English), regional varieties should also be mentioned. In Punjabi English as well as some Tibeto-Burman varieties stress is quantity-sensitive: ma’chine, ex plore. In Tamil English stress is quantity-insensitive, and only the initial syllable is stressed, regardless of the weight of the internal ones: machine, approve. In contrast, in many Tibeto-Burman languages of the Northeast India the stress is usually fixed on the final (ultimate) syllable. Although variation is great, a few generalizations can be made for Indian English:
— Word stress is insensitive to the syntactic category of words: the following words could be nouns, verbs or adjectives: insult, conduct, present.
— Word stress is predictable on the grounds of quantity-sensitivity: in most cases if the second syllable is not extra-heavy, the stress is on the initial syllable in a disyllabic word: ‘cassette, ‘canoe, ‘degree, ‘tattoo, ‘concrete, ‘shampoo. In trisyllabic words stress is also on the first syllable unless the second syllable is heavy: mo’desty, cha’racter. Moreover, if a word ends in a diphthong, the final syllable takes the stress: de’fy, a’llov.
— The segmental composition of the word may be restructured, the vowel length is changed: ‘event [’i:vent], compe’r[ei:]tio.
— In compound words the stress is on the first item: ‘college canteen, ‘north-east, ‘two-wheeler.
— In abbreviations the stress is on the first syllable: ’TV, ’BBC.
In *Singaporean English* lexical stress placement displays similarity and dissimilarity features [19, P. 135–153]:

— Quantity-sensitivity;
— Stress on alternative syllables (rhythmic tendency);
— Primary stress on the final syllable.

We can sum up the South-Asian features which constitute the common core in stress assignment: correlation between stress and the relative weight of syllables (quantity-sensitivity); grammatical class of words (nouns, verbs, adjectives) is not observed. There are also features of *sentence stress* which force every monosyllabic word to be stressed in discourse creating the effect of *syllable-based rhythm*, as well as the Indian English feature of stressing pronouns at the beginning of the sentence and un-English focusing, which impedes comprehensibility. Indian English rhythm which is based on Hindi is found to be less syllable-based than Hong Kong English which is based on Chinese and Malay but it still creates difficulties in speech intelligibility.

Speakers of *African varieties*, *Cameroonian English* and *Nigerian English*, find the stress system of English to be very complex. Their strategies in stress assignment stem from the knowledge of the general rules in English, on the one hand, and rules devised in the indigenization of English, on the other [9]:

— Initial stress to follow the English “backward” (recessive) tendency but with no exception found in native English: *appendix, canoe* [ˈkenu], *elite* [ˈelai], *arena, umbrella, diploma, mosquito*;  
— Noun-verb alternation is a guide to word stress placement: *success, advice, applause* (nouns); *kidnap, purchase* (verbs), the verb *record* is an exception;
— Adjectives tend to have initial stress like nouns: *acute, extreme*;
— Syllable weight is decisive in the choice of stress place: *multi pl, veri fy, sur vey, rea lize, exer cize*;
— Rhymes consisting of a vowel + consonant cluster also attract stress: *cha llenge, or chestra, Pro testant* [9];
— Guyanese speakers pronounce: *ba rister, mi nister, pa senger* [22, P. 583];
— Generalized application of a stress property of an affix: *A rabic, rhe toric*;
— In derivatives the stress pattern of the base is used (retentive tendency): *ad mire – ad mirable, com pare – com parable*.

Innovative rules:

— A final rhyme with [i] pulls stress to the final position: *hap tist, te nnis, bis cuit, cu rry, pe tty*;
— Final rhyme with [n] is stressed: *as pi rin, va ccine, mara than*;
— English first names ending in high front vowels: *Char lie, Ne lly*;
— Forward stress: *mo del, fu el, sa lad, pe troll, e ligible, pa talable*.

Summing up the tendencies presented as “strategies” in choosing stress placement by Cameroonian and Nigerian speakers we can distinguish two: overgeneralization of English-based rules and innovative rules like “forward” stress and [i] and [n] rhymes, also pulling the stress forward [9].

**Expanding circle**

“Expanding circle” varieties are also called “norm-dependent” compared to “inner circle” varieties which are “norm-providing”, and “outer circle” ones which are “norm-developing” [19]. Since “expanding circle” speakers acquire their knowledge of English and its stress rules from education, at least initially, the problem of target model is relevant, considering the “inner circle” varieties and their distinctions (See above). Brazil, for instance, is known to choose the American variant of pronunciation, while EuroEnglishes are more likely to be loyal to British English. In China and Russia the situation is more complicated: there is a long-standing tradition of teaching British English but nowadays learners are exposed to American culture and accents through media, pop culture, films, travel and other sources. The new input and linguistic experience have their impact: learners in Russia display a mixture of both British and American features of English pronunciation, with the former still prevailing. In China young people are reported to practise “code-mixing” by introducing American-sounding English words into their L1 discourse, thus demonstrating their new modern identities.

Whatever the target model was at the beginning, L1 habits and rules remain the strongest modifying force in shaping Russian learners’ English pronunciation, including stress placement and phonetic cues of stress. Fortunately, in the Russian stress system there are basic features common with English: “dynamic stress” creating stressed/unstressed syllables contrast by changing the force of articulation, i.e. intensity, pitch, duration and vowel quality through reduction in unstressed syllables. Russian stress may fall on any syllable in the word and has to be learned lexically, that is together with its segmental structure. No Russian can enumerate the Russian rules of stress (with the exception of Russian linguists, probably) but one is aware of its distinctive function in certain pairs of words with stress shift, and sensitive to misplacement of stress of regional and social character. Thus, Russians have a cognitive task of watching out for the “correct” stress, unlike the French speakers who did not have that task on account of the fixed stress in French invariably falling on the ultimate syllable in an accent group (not a word stress, actually, as most linguists agree). The specific features of Russian learners in the domain of stress in English are as follows:

— Diminishing the stressed/unstressed contrast by not observing the length of tense vowels in stressed syllables: *garden, leave-taking*;
— Missing an important signal of stressed syllable by pronouncing voiceless plosives in stressed syllables without aspiration: *paper, turbulence, cookies*;
— Ignoring the presence of secondary (and tertiary) stresses in long English words, following the culminating function of stress and leaving out its rhythmical function: *demon stration, accom mo dation, gooseberry*;
— Shifting the stress to the diphthong in the final syllable (quantity-sensitive) in such verbs as *recog nize, exer cise, mini mize*. 

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Mandarin Chinese is a tone language which has a syllable-based rhythm, but researchers find that it also has a metrical structure similar to English rhythm in discourse [7], with such specific characteristics that tone performs the function of stress. Experimental measurements of disyllabic words in Mandarin read in citation form evidenced that the initial syllable in disyllables had a full-fledged tone, while the second syllable was read with the so-called “neutral” tone. That brings up the subject of the next section about the phonetics of stress in different languages, i.e. prominence cues and perception cues of stress.

**Phonetic cues of stress**

In the “inner circle” countries there is an extensive literature on the phonetics of English stress which is widely attested as expressed by such prominence-lending means as intensity, duration, pitch and vowel quality contrasted in stressed and unstressed syllables. However, linguists refer these means to discourse only, i.e. to sentence stress, or phrase stress, while lexical stress marked in the dictionary is considered a potential place which could be realized in speech, when accentuated. Of special interest is the empirical evidence presented in the publications by Anna Cutler who proved that native speakers (Australian citizens) quickly identified the word in the pair  *permit* – *per mit* by fully relying on the first segmental cues at the beginning of the word: aspiration/absence of aspiration, full-fledged vowel/reduced vowel. In contrast, Dutch listeners were more receptive to prosodic means of pitch and duration [11], [12], [13].

In the “outer circle” varieties phonetic cues of stress may be quite different. In Indian English, for instance, the stressed syllable is pronounced on a low pitch, whereas the native English stress normally attracts high pitch for prominence. The low pitch of Indian speaker may cause misunderstanding and bring out other words as prominent. In the English language, as is well known, accentuation is closely connected with information structure, but that would be a matter of sentence stress. Here we will confine our discussion to lexical stress as a means of word recognition. More relevant to the topic will be the results of the experiment with reading lists of English words. Educated speakers of Indian English whose L1s are Hindi and Malayalam produced 81% of verbs stressed on the antepenultimate syllable (*calculate*), while 19% were stressed on the final syllable: *calc u late*. 69% of nouns were stressed on the penultimate syllable (*calculation*), while 31% on the antepenultimate: *calculation*. Individual speakers, however, were inconsistent in their stress patterns usage. The difference between primary and secondary stresses was insignificant. Primary stress could be shifted only to the position of the secondary stress, nowhere else. Acoustically, the results suggest that speakers of Indian English rely on differences (in order of importance) in intensity, spectral balance, duration and pitch slope [15].

Many authors found it difficult to distinguish “outer circle” varieties from “expanding circle” varieties. For Indonesian English speakers, for instance, duration was more relevant as a cue to stress, while native speakers of English distinguished it by pitch and amplitude.

Experiments designed to compare acoustics and perception of English stress in reading by Chinese and native speakers of Canadian English proved that Canadians had higher reliance on pitch and intensity than duration. By comparison, Mandarin Chinese speakers demonstrated that pitch was of higher relevance than intensity and duration; Chinese listeners also had greater sensitivity to pitch contour change. Similar data was reported on perception of stress in Singaporean English [21].

**Conclusion**

Word stress is an important means of structuring the word, shaping it for word recognition. Its placement and phonetic features are relevant, therefore, for speech intelligibility [14]. At the same time specific rules of stress placement are governed by indigenized languages which come into contact with English, and provide for identity of speakers. Both aspects, intelligibility and identity, are important for intercultural communication.

The present survey demonstrated diversity of world Englishes today, starting from the varieties of “inner circle” among which British English and American English are still the major norm-providing varieties in the domain of stress. Canadian, Australian and New Zealand varieties, however, developed their national norms in which British and American features (close in their percentages) are counterbalanced by specific national features reaching up to 24% of the stress patterns which constitute their identity.

In a similar process of norm-developing, post-colonial countries of the “outer circle” demonstrate greater variability of norms in stress placement based on typologically different languages. Pronunciation dictionaries are not compiled yet but research papers have generalized data on the main tendencies: quantity-sensitive pull towards heavy and extra-heavy syllables; overgeneralizations in following the recessive tendency with no exceptions; non-distinction of grammatical word classes; no vowel quality reduction in unstressed syllables.

In the norm-dependent countries of the “expanding circle” where English is acquired by educating schoolchildren and students, there emerged a problem of the target norm which is complicated (or facilitated) by access to other varieties of English. Nationally specific features of Russian learners’ stress placement are not destructive to international communication. South-Asian tone languages speakers, Mandarin Chinese, for instance, experience greater difficulties in stress placement and its phonetic cues in cross-cultural discourse.

### Conflict of Interest

None declared.

### References