

The role of the secondary stress in teaching the English rhythm

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Suggested Citation:

Yurtbasi, M. (2017). The role of the secondary stress in teaching the English rhythm. *Global Journal of Foreign Language Teaching*. 7(3), 101-106.

Received date March 02, 2017; revised date May 05, 2017; accepted date July 06, 2017.

Selection and peer review under responsibility of Assoc. Prof. Dr. Ali Rahimi, Bangkok University, Thailand.

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Abstract

In the phonological literature in English, which is a stress-timed language, the existence of at least three levels of stress is usually taken for granted. Words, phrases, utterances or sentences have a prominent element in one of their syllables, which usually correlates with a partner in the same unit, called the secondary stress. It so happens that in multi-syllable words or groups bearing more than two content words, there is also a tertiary stress. Function words neighbouring the content words are usually not stressed or they are reduced. In standard writing, the primary stress is indicated by an acute accent, the secondary stress by a grave accent while the lack of stress is not marked at all. This article proposes that the distinction between primary and secondary stress should have more prevalence in the pronunciation teaching curricula, as they expose the rhythm of English and convey the intended meaning clearly.

Keywords : Stress-timed language, primary stress, secondary stress, tertiary stress, rhythm.

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1. General Considerations of the 'Secondary Stress' and Its Function

The secondary stress (as we sometimes call the *secondary accent*) is the weaker of the two degrees of stress in the pronunciation of a single word, a compound word or a phrase forming a thought group (Zapata, 2009). The stronger degree of stress or prominence is called 'primary' and that of a weaker degree is referred to as 'secondary' (Fudge, 1984). The IPA symbol for secondary stress is a short vertical line preceding and at the foot of the stressed syllable (Ladefoged & Johnson, 2011). For instance, the syllable 'nun' in the word 'pronunciation' [prəˌnʌn'si:ʃən] has the secondary stress. Another tradition in English to show stress is to assign acute and grave accents for primary and secondary stress as in 'pronunciation' (Roach, 2009).

Most languages, if they have stress at all, have only one degree of it on the phonemic level. However in English, having such a suprasegmental structure as the secondary stress is a great asset in that the distinction in stress between the compound words and phrases points out the meaning intended to convey the meaning more clearly between the modified element versus the item that modifies it (Knowles, 1987). For instance in the compound word 'tax relief' ['tæks rɪˈli:f], the word 'tax' has higher prominence than 'relief', with the former word having the primary stress reducing the latter to secondary and making the meaning of the word clearer where the stress is placed (ibid).

Explaining it a little further with another example, again in the compound 'English teacher' ['ɪŋɡlɪʃˌti:tʃə], the word 'English' ['ɪŋɡlɪʃ] has prominence over 'teacher' [ˌti:tʃə], thus meaning that the teacher actually teaches English but he himself is not necessarily of English origin (Giegerich, 2004). However, if the first word 'English' falls into the secondary prominence over the second item as in the 'English teacher' [%ɪŋɡlɪʃ ˌti:tʃə], then we can safely assume that the teacher who does the teaching, himself, is English (BBC, 2017).

So the meaning of phrases or compounds can be better understood by where their primary and secondary stresses fall. Here is yet another typically striking example: 'a black, board-er, raser' [əˈblæk, bɔ:d-ɪ, reɪsə] (a board-eraser that is black) vs. 'a, black-board er, raser' [ə, blækˈbɔ:d-ɪ, reɪsə] (an eraser for a blackboard) (Giegerich, 2014). Also, in the sentence 'My bike has been, stolen' [maɪˈbaɪk, hæz bɪnˈstɔ:lən] vs. 'My, bike has been stolen' [maɪ, baɪk, hæz bɪnˈstɔ:lən] the words 'bike' and 'stolen' have correlation in meaning between the two, and either one may have primary or secondary stress according to the prominence of their meaning (ibid). Thus the secondary stress plays a very important role in distinguishing the shades of meaning or the intensity of the utterance of the whole sentence.

Let us continue with other examples, for instance in a question statement such as 'Is this my, birth, day present?' [ɪz ðɪs → maɪ, bɜ:θ, deɪˈprezənt], the primary stress on the word 'this' and secondary stress on 'birthday' expresses a surprise on the nature of the gift (Puzzler, 2017). On an alternate mode, in the newly formed intonation pattern 'Is, this my birth, day, present?' [ɪz, ðɪs → maɪˈbɜ:θ, deɪ, prezənt], the rising prominence on 'birthday' ['bɜ:θ, deɪ] reduces the stress to a secondary position on 'this' arousing curiosity on whether the parcel actually contains a 'birthday' ['bɜ:θ, deɪ] present or perhaps something else (ibid). As for the lexical formation of secondary stresses, much could be said about the recognition of their location. If we study such multisyllable words with their bases such as 'exPLAIN' [ɪksˈpleɪn] vs. 'explaNATION' [ˌɛkspləˈneɪʃən], 'conSIDer' [kənˈsɪdə] vs. 'con,sideRATION' [kənˌsɪdəˈreɪʃən], 'asSOciate' [əˈsoʊˌʃieɪt] vs. 'as,sociATION' [əˌsoʊˈʃieɪʃən] and "CHARacter' [kærəktə] vs. ',characterIZATION' [ˌkærəktəɪˈzeɪʃən], we immediately recognise that the derivatives show a change in the position of primary stress leaving their earlier prominence to the reduced form as the secondary stress (ibid).

The role of secondary stress becomes more obvious in full sentences where meaningful thought groups are separated from one another by sustained junctures. In such thought-chunks those elements having greater prominence in meaning assume primary stress in pronunciation, whereas those with less prominence do fall into secondary positions (Yurtbasi, 2017). To exemplify this statement, here are some English proverbs being divided into such thought-groups separated by

juncture signs showing clearly individual instances of primary and secondary stresses: 'The 'BEST things in life → ,are 'FREE ↓ [ðə 'best, θɪŋz In laɪf → ,a:ə 'fri: ↓] 'A 'STITCH in ,time → ,saves 'NINE ↓ [ə 'stɪtʃ In taɪm → ,seɪvz 'naɪn ↓] 'STILL ,waters → ,run 'DEEP ↓ ['stɪl ,wɔ:təz → ,rʌn 'di:p ↓] 'He 'TEACHes ,ill, → who 'TEACHes ,all ↓ [hi 'ti:tʃəz Il → ,hʊ 'ti:tʃəz ɔ:l ↓] 'You 'CAN'T ,take it with ,you → ,when you 'DIE ↓ ['jə 'ka:nt ,teɪk It wɪθ 'ju → ,wɛn jə 'da:I ↓] 'Better 'UN ,taught → than 'ILL ,taught ↓ [,betə 'rʌn ,tɔ:t → ,ðæ'n Il ,tɔ:t ↓] 'DON'T ,cross your ,bridges → be ,fore you 'COME to ,them ↓ ['dɔʊnt ,krɒs jə 'brɪdʒəz → ,tɪl jə 'kʌm tə ,ðɛm ↓] "SOON ,learnt → ,soon for 'GOTten ↓ ['su:n ,lɜ:nt → ,su:n fə'gʌtən ↓] "Even a ,worm → will 'TURN ↓ ['i:vən ə ,wɜ:m → ,wɪl tɜ:n ↓] 'It was the 'LAST ,straw → that ,broke the 'CAMEl's ,back ↓ [,ɪt wəz ðə 'lɑ:st ,strɔ: → ,ðæt 'brəʊk ðə 'kæməlz ,bæk ↓] 'The 'WAY to a ,man's heart → is ,through his 'STOMach ↓ [ðə 'we:I,tʊə 'mænz ,hɑ:t → ɪz ,θru: hɪz 'stʌmək ↓] 'Where there's a 'WILL → ,there's a 'WAY ↓ [,we:ə 'ðɛə rɪz ə ,wɪl → ,ðɛə rɪz ə 'we:I ↓] "MARry in ,haste → and re'PENT at ,leisure ↓ ['mæri In ,heɪst → ,æn rə'pɛntət ,leɪzə ↓] 'If you wish 'GOOD ad ,vice → con ,sult an 'OLD ,man ↓ ['ɪf jə ,wɪʃ 'gʊdəd vaɪs → kən ,sʌlt ə'nəʊld ,mæn ↓] "NO ,news → is 'GOOD ,news ↓ ['no:ʊ ,nju:z → 'gʊd ,nju:z ↓] "BIRDS of a ,feather → 'FLOCK to ,gether ↓ ['bɜ:dz əv ə ,fɛðəz → 'flɒk tə ,gɛðə ↓] 'Tell me 'WHO you ,go with → ,and I'll 'TELL ,you 'WHO you ,are ↓ [,tel mi 'hu jə 'gəʊ ,wɪθ → ,æn əɪl 'tel jə 'hʊ ,jʊə:ə ↓]

2. The Location of the Secondary Stress

What makes the acquiring of the correct pronunciation of the English words extremely difficult for foreign speakers is that English has several degrees of word stress (Fudge, 1984). All words in English have a primary stress, whose placement is totally unpredictable. In addition, long words in particular have a secondary stress. Phonologists also distinguish a tertiary stress, but for the purpose of this short presentation, I will just restrict the contrast only in these two types of stresses (Davenport & Hannahs, 2013).

All the vowels of a six-syllable word except the one with primary stress may be considered as unstressed syllables whose vowels are reduced to schwa: im.par.ti.'a.li.ty [ɪm%paəvΣɪæləti] (Taalportaal, 2017). However, we notice that the vowel in the first syllable, far from being reduced to schwa is a long, tense vowel. The fact that the vowel has managed to preserve its value though primary stress doesn't fall on that syllable is explained by the fact that the second syllable of the word bears a clear secondary stress (Davenport & Hannahs, 2013). And we duly mark this syllable by a lower case [,] stress sign to show its secondary prominence.

In some cases, secondary stress falls in those syllables where the prominence previously falls but the main stress moves towards the end of the word (Wenszky, 2000): Here are some examples: library ['laɪbrəri] vs. [,laɪ'breɪrɪən], secretary ['sekɪtri] vs. secretarial [,sekre'teɪrɪəl], and some with no previous roots: dormitory ['dɔrmɪ,tɔri], testimony ['tɛstɪmɔni], matrimony ['mætrɪ,mɔni], ceremony ['sɛrə,mɔni] or photograph ['fɒtə,grɑ:f], photography [fə'tɒgrəfi], photographic [,fɒtə'græfɪk]

3. Compound Stress and Phrasal Stress

The compound stress pattern is a reliable indicator of compound status, since this stress pattern would never be possible in a syntactic phrase (Gao, 2017). The compound stress is the stress falling on the initial part of the thought group: cowboy, school bus, Christmas present, ballet lesson, elevator operator, peanut butter jar label, blockhead, blackberry, yellow jacket, watchdog, crybaby, cover letter; scarecrow, carsick, sunbathe, waterski, freeload, deep-fry, stir-fry, tie-dye, red-cheeked, pig-headed, levelheaded, home-grown, over-rated, home-cooking, late-blooming; sightseeing, mountain-climbing, book-marked, Labour Day, Veteran's Day, Main Street, Easy Street etc. In the phrasal stress, the latter words have stress and we refer to it as the rightmost stress (Gordon, 2004). So here the stress occurs towards the end of the statement as opposed to the initial stressing in compounds. 'the

'brother of Mary' vs. 'Mary's brother' – He was teaching linguistics – 'He was teaching in Ghana'

Most expressions that linguists would classify as compounds take compound stress, i.e., a pattern. The secondary stress, compared to primary is weaker in prominence (Plag, Kunter & Lappe, 2007). Gimson (1967) defines a syllable that bears secondary stress as the syllable articulated with the second highest degree of energy. He defines secondary stress as an accentuation that has no pitch prominence (Gimson, 1967). Pitch prominence is carried by primary stress. While in writing, the primary stress is often indicated by the mark ' before the stressed syllable, for secondary stress the same mark is used but is placed at the foot of the syllable in question (ibid). Secondary stress usually appears in longer words such as pronunciation [prə ,nʌn 'si'eɪʃn] in English. It is also important to note that besides primary and secondary stress there is 'unstressed'. The stressed syllables, whether being stressed primary or secondary, are only realised in contrast with syllables that are not stressed, are 'unstressed' (Mattys, 2012).

Compound words are words that consist of two units, these being created by independent English words. So far as stress placement in compounds is concerned, compounds usually contain a single primary stress on one element of the compound, the other element or elements carrying secondary stress (Gimson, 1967, p. 224). Compounds frequently consist of two nouns. These usually have the stress on the first element (e.g., 'sunrise' ['sʌn%raɪz]. Compounds comprising adjectival first element and the -ed morpheme at the end receive stress on the second element (e.g., %bad∇tempered' [, bæd 'tempəd]. For compounds that have a number of some form as the first element the stress will fall on the second element (e.g., %second∇dass [, sekənd 'klɑ:s]. Compounds functioning as adverbs are usually finalstressed (e.g., %North-∇East [, nɔ:θ 'i:st]). Compounds that are final-stressed also include those that function as verbs and have an adverbial as the first element (e.g., %down∇grade' [, daʊn 'greɪd].

If we compare the stress pattern of compounds with that of phrasals, we see a clear distinction between their location (Giegerich, 1992). Let's take the example of 'blackbird' – a compound – and 'black bird' – a phrase. Following the rule of stressing a compound that is made up of two nouns, blackbird is stressed on the first syllable and semantically, it is a type of bird. If talking about a phrase, the second word is stressed and any kind of bird that is black is meant (ibid). Other examples include ∇black%board (a board used in classroom) – %black∇board (a board painted black), or ∇dark%room (a lightless room for developing photographs) - %dark∇room (a room with not much light in it).

It is good to note at this point that connected speech may influence moving the stress to the preceding syllable, as is the case of 'bad-tempered' / , bæd 'tempəd/ that becomes 'bad-tempered teacher' / ' bædtempəd 'ti:tʃə/. Similarly to stressing certain syllables in polysyllabic words, during a speech production some words are made more prominent. 'The position of the stress is determined largely by the meaning which the utterance is intended to convey' (Plavka, 2003).

As for sentence stress, one single sentence such as 'John hasn't arrived' can be uttered in three different ways according to meaning intended: 1) John % hasn't ar∇rived 2) John ∇hasn't ar % rived, and 3) *John* %hasn't arrived, with the word shown in italics being more prominent than the rest of the elements. The first utterance may be said in a situation where it is known that John has set out to get here, but is not here yet. The second one may be a correction of someone who claims that John has arrived. The last one will possibly try to convey that John was supposed to have come but was not among the people that had come (Fudge, 1984).

Whatever message we want to convey, however, there are certain rules that indicate which words are possibly going to be stressed in an utterance and which are not. As for the secondary stress placement, the prominence sometimes fall on those places which were dominant earlier, but there is always a balance between the two to establish the rhythm of the sentence (Wenszky, 2000).

4. Secondary Stress Exercises in Phrases and Sentences

While teaching the distinction between the primary stress and the secondary, minimal pairs could be used to show the stress mobility (word stress, 2017) as in the following examples. In the first part of the pairs, the initial primary examples are contrasted with those initial-secondary right after them:

'prosecutor' [ˈprɒsɪˌkju:tə] vs. 'prosecution' [ˌprɒsɪˈkju:ʃn] – 'delegating' [ˈdɛləˌgeɪtɪŋ] vs. 'delegation' [ˌdɛləˈgeɪʃn] – 'presidency' [ˈprezɪdənsi] vs. 'presidential' [ˌprezɪˈdɛnʃl] – 'category' [ˈkætəgəri] – 'categorical' [ˌkætəˈɡɔːrɪkəl] – 'consequently' [ˌkɒnsəkwəntli] vs. 'consequential' [ˌkɒnsəˈkwɛnʃl] – 'navigator' [ˈnævəˌgeɪtə] vs. 'navigation' [ˌnævɪˈgeɪʃn] – 'vindictive' [ˈvɪndɪˌkeɪtɪv] vs. 'vindication' [ˌvɪndɪˈkeɪʃn] – 'fabricating' [ˈfæbrɪˌkeɪtɪŋ] vs. 'fabrication' [ˌfæbrɪˈkeɪʃn] – 'segregating' [ˌsɛɡrɪˌgeɪtɪŋ] vs. 'segregation' [ˌsɛɡrɪˈgeɪʃn], 'replicating' [ˌrɛplɪˌkeɪtɪŋ] vs. 'replication' [ˌrɛplɪˈkeɪʃn] – 'hesitating' [ˈhezɪˌteɪtɪŋ] vs. 'hesitation' [ˌhezɪˈteɪʃn] vs. – 'agitating' [ˈædʒɪˌteɪtɪŋ] vs. 'agitation' [ˌædʒɪˈteɪʃn] – 'celebrating' [ˈsɛləˌbreɪtɪŋ] vs. 'celebration' [ˌsɛləˈbreɪʃn] – 'indicator' [ˈɪndɪˌkeɪtə] vs. 'indication' [ˌɪndɪˈkeɪʃn], 'calculated' [ˈkælkjəˌleɪtɪd] vs. 'calculation' [ˌkælkjəˈleɪʃn] – 'generator' [ˌdʒɛnəˌneɪtə] , 'generation' [ˌdʒɛnəˈneɪʃn] – 'fascinating' [ˈfæsəˌneɪtɪŋ], 'fascination' [ˌfæsɪˈneɪʃn] – 'dominating' [ˌdɒmɪˌneɪtɪŋ] vs. 'domination' [ˌdɒmɪˈneɪʃn] – 'terminating' [ˌtɜːməɪˌneɪtɪŋ] vs. 'termination' [ˌtɜːməɪˈneɪʃn], 'decorator' [ˈdɛkəˌreɪtə], 'decoration' [ˌdɛkəˈreɪʃn], 'demonstrator' [ˌdɛmənsˌtreɪtə] vs. 'demonstration' [ˌdɛmənsˈtreɪʃn] – 'cultivating' [ˈkʌltɪˌveɪtɪŋ] 'cultivation' [ˌkʌltɪˈveɪʃn] – 'aggravating' [ˈæɡrɪˌveɪtɪŋ] vs 'aggravation' [ˌæɡrɪˈveɪʃn] – 'ceremony' [ˈsɛrəməni] vs. 'ceremonial' [ˌsɛrəˈmɔːniəl]

The teacher can also ask students to mark in several sentences their primary and secondary stress as intonation exercises while he reads them aloud (Zapata, 2017):

'John 'loves ,Mary' [dʒɒn 'lʌvz %mɛəri↓] — 'Pho 'netics is ,easy' [fə'vnetɪks Iz ,i:zi↓] – 'Want to 'see ,it?' [wʌnt tə 'si:ɪt↑] – ',I'm eɪg ,teen' [%aɪm eɪ'ti:n] – ',Were they 'home?' [%wɜ:ə ðe:ɪ 'həʊm↑] 'A 'week a%go' – '∇Where do you %live?' – '∇Come %here, ∇please' – 'You%study ∇English?' – '∇How are %you?' – '∇Fine, ∇thanks' – '∇Who did%that ?' – '%Mrs. ∇Jones' – '% Mrs. ∇Jones?' – '%Yes, ∇she %did' – 'The si%tuation is in∇tolerable' – '∇What %time % did you ∇call?' – 'Would you like some coffee?' – 'The teacher is sick?' – 'The President likes swimming, doesn't he?' – 'We speak Spanish in Venezuela, don't we?' – 'How much money have you got?' – Pay attention to your teacher. – Let's rent a car. – Don't be silly. – Why are you angry? – Did you understand my explanations? – Will you come to class tomorrow? – Who broke the chair? – You didn't feel the earthquake? – Is that John over there? – You know it as well as I do. – This room is more expensive than that one. – Do you know John, dear? – Good morning, Mr. Smith! – Young man, we'll see you later. – My friend, I want to tell you something. – You want a chair, don't you? – Shall we meet here, or in your room? – I looked down, and there were my keys. – It's unbelievable! – What a beautiful day! – I ordered an apple not a pear. – Pass me the onion near the sugar bowl. – Are you coming to our party? – Is he the man you talked to me about? – I already know him, but I haven't met her yet. – Ask them all the questions you want. – Where were your glasses? – John'll do the work for you? – I was cleaning the house when he arrived. – There are eighteen students in my class. – What's it mean? – The teacher gave each one of us a piece of cake. – There's a cat under the table. – Who are you waiting for? – Have you seen Arthur? – How long has he lived in Middleford? – Let's have a party on Friday. – Is Bruce going to ring Mary up? – No, he's telephoning another girl. – What's Mr. Steele putting on? – Can you tell me the time? – You mustn't smoke in class. – Arthur, come into my office. – Do you speak English? – What can I do for you? – May I help you? – Whose house does Arthur live in? – I've just come back from England. – We're going to visit Jenny, Mary and Sheila. – Would you like to go to the cinema or to the theater? – Did you feed the chickens? – How often does Mary go to a restaurant? – What's the matter with you? – Don't miss class. – You study English, don't you? – You can't smoke in class, can you? – Will he come tomorrow? – You have nothing cheaper? – May I ring the bell? – You're married, aren't you? – My English students don't watch TV, do they? – What time did you call? – We speak Spanish in Venezuela, don't we? – John, are you listening to me?

5. Conclusion

In many phonological approaches, and in many dictionaries, English is represented as having two levels of stress: primary and secondary. In every lexical word, and in some grammatical words, one syllable is identified as having primary stress, though in monosyllables the stress is not generally marked. In addition, longer words may have one or more syllables identified as having secondary stress. Syllables that have neither are called unstressed. Secondary stress is frequently indicated in the following cases: In words where the primary stress falls on the third syllable or later. In many compounds or phrasals, where one part of them is pronounced more prominently. Teaching students the distinction between primary and secondary stress is of utmost importance for their acquisition of the rhythm of English. English being a stress-timed language where stressed syllables occur approximately at regular intervals and the correlation of primary and secondary stress carries a special function for conveying the intended meaning, even unstressed syllables bear their own mission to support them with their absence of stress. So the neglect of such an important function in sentence rhythm cause many problems in oral communication that need to be overcome or prevented at an earliest stage before students of English move any further in their pronunciation studies.

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