
Bushra NI'MA ¹

**STRESS IN ENGLISH AND ARABIC: A CONTRASTIVE
STUDY**

Research Article

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Abstract:

The present study investigates the notion of lexical stress in Arabic and English. It attempts to answer the question whether English has a different stress framework than Arabic. To answer this question, this paper is outlined to examine stress as a notion in addition to its types, patterns, and functions in both languages under investigation. Analysis of these notions, to find out contrasted as well as similar aspects of lexical stress in the two languages, is to be proposed. In the light of these results, conclusions are drawn out that, English stress varies in correspondence to different phonetic contexts and different speakers. In contrast, Arabic has fixed rules to place stress.

Keywords: Lexical Stress, Standard English, Standard Arabic, Syllable.

¹ Dr., University of Baghdad, Iraq, Bushra.nima@ircoedu.uobaghdad.edu.iq

Introduction

Stress is the phenomenon concerned with emphasizing an element against its environment. Hartmann and Stork (1972, pp. 220-1) states that stress is an uttermost energy in articulating one syllable or a word to highlight its dominance upon other elements in the same sequence. Syllables that are stressed or accented are usually related to the production of more chest pulse. However, Crystal (1992, p. 369) further adds that, stress in English is of three types: Sentence stress (a word is stressed over others in a sentence) and word stress (a syllable is stressed over other syllables in a single word structure) and phrase stress. It also of different degrees or levels of force in production, these levels are primary, secondary and weak stress. As for Crystal, accented syllables are generated with greater concentration, higher pitch and longer duration than they are in an unaccented syllable. Nevertheless, the question is whether other languages like Semitic Arabic has the same system and patterns or of different ones. The contrast is examined through viewing both systems of stress of both languages selected to the study.

The study consists of three sections. The first section tackles the notion of stress, types, and levels in English. The second section is devoted to the study of stress in Arabic Language System. Section three is concerned with comparing and contrasting these notions proposed to skim systematic aspects between Arabic and English based on James` (1980) model of contrastive analysis. Finally, conclusions are drawn out.

Section One: Stress in English

1.1. The Notion of Stress

Roach (1983, p. 94) brings up that stressed/accented syllables are perceived as stressed in light of the fact that they are more noticeable than unstressed syllables by four components: loudness, length, pitch and quality. In other words, stress can be studied from the point of view of production and of perception, however, the two are obviously closely related but are not identical. The creation of stress is broadly assumed to rely upon the speaker utilizing of increasingly strong exertion is difficult, yet it appears to be conceivable, as indicated by experimental studies about that, when stressed produced, syllables, the muscles that used generate air from the lungs are regularly progressively dynamic, delivering higher sub-glottal pressure. Gramley and Pätzold (1992, p. 109) state that the phenomenon of stress is difficult to define. Functionally, it serves to emphasize something against the background of its environment. This can take place in the form of a change in loudness, a change in pitch, or a change in duration. Stress has a direct impact on the realization of a phoneme. Ladefoged (1993, p. 11) reports that a stressed syllable is delivered by driving more air out of the lungs in a single syllable comparative with others. A stressed syllable, hence, has more prominent respiratory vitality than close unstressed syllables. Stress can be something a speaker does in a single piece of a sequence in relation to another. Kelly (2000, p. 67) denotes that so as for one syllable to be recognized as stressed, the syllables around it should be unstressed. For stressed syllables, three variants were distinguished: loudness, pitch, change and a relatively longer syllable in the duration of articulation. Unstressed might be depicted as the nonappearance of these characteristics on the scene. Ashby and Maidment (2005, pp. 154-56) accept that stress influences the entire syllables as opposed to single segment. The impact of accenting a syllable is to make it increasingly conspicuous, more perceptible than other syllables related. In this way, stress is a relational element, not at all like those characteristics of place and manner of articulation or vowel quality character. The manner by which a stressed syllable is made more noticeable than different syllables in the expression is as a rule by a mix of components: length, loudness, and pitch. Collins and Mees (2008, p. 16) state that expression of more than one syllable is named a polysyllable when an English polysyllabic word is said in its reference structure (for example articulated in segregation) one unequivocally stressed syllable will stand out from the rest. This can be demonstrated by a pressure mark ['] put before the syllable concerned, for example, recently/jestədeɪ/.

They likewise state that in English four phonetic factors show up generally huge as pointers of stress: intensity, pitch, variety, vowel quality, and vowel length.

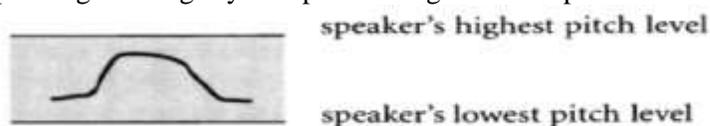
1.2 Functions of Stress

Ladefoged (1993, p. 114) accepts that stress has distinct capacities in English. In any case, it tends to be utilized basically to give uncommon concentration to a word or to contrast single word with another. For example, Stressing 'John' in: 'JOHN broke the window.' means that it is John who broke it not someone else. If the stress is shifted to the 'window', then it means that John broke the WINDOW rather than something else.

Another significant capacity of stress in English is to demonstrate the syntactic connections between words or parts of words. There are numerous noun-verb appositions such as a present, to present, an overflow, to overflow. These sets of words can be differentiated either a noun or a verb by means of stress. Its first syllable is stressed to denote a noun, the second is stressed to denote a verb.

1.3 Levels of Stress

Roach (1983, pp. 95-96) states that the pitch movement can be shown in the diagram below, where the two corresponding lines signify the speaker's high and low pitch level:



In certain words, a kind of stress that is weaker than essential stress. However more intensive than that of the primary syllable of 'around'; for instance, in the main syllables of the words 'photographic'/fətəgræfɪk/, 'humanities'/ænθrəpələdʒi/. The stress in these words is called 'secondary stress.' It is marked with a low sign [,] so the examples could be transcribed as/fətəgræfɪk/, /ænθrəpələdʒi/. Roach has distinguished two degrees of stress primary and secondary; this additionally infers a third level which can be called unstressed.

Ladefoged (1993, p. 117) states that there are a few degrees of stress in English. The best level of stress is called stress level one, the following is level two, the following level three, a lower level still is level four, etc.

Kelly (2000, p. 69) says that syllables as far are either stressed or unstressed. Indeed, within longer words, syllables can have various degrees of stress. To be hypothetically precise, all syllables should be considered according regarding their degree of stress, nonappearance, especially when dealing with words in separation.

Collins and M. Mees (2008, p. 125) accept that the most prominent stress is the primary stress (in the example 1); the following level, secondary stress (showed by 2) whatever else is treated as unstressed. Primary stress is regularly indicated by a vertical sign ['] put over the line. Where it's important to show a secondary stress, this is appeared by a vertical sign underneath the line, others are left unmarked. For most purposes, it is adequate to show just primary stress (Roach, 2000).

1.4 Syllable in English

Since stress entails the prominence of a syllable over other syllables in an environment, it is logically necessary to examine the notion, structure and types of a syllable in English as the main unit of stress. Syllable, as a term, refers to the essential, however, intangible units of a language phonological system. It includes, a short series of segments which are, in turn, consisting of a single vowel normally headed and/or followed by a single or a cluster of consonants (Trask, 1996, p. 345).

More clearly, Crystal (1992, p. 377) puts syllable as the "The minimal unit of organization for a sequence of speech sounds, acting as a unit of rhythm." Crystal comments that a syllable, normally

consists of a single obligatory nuclear vowel and a nonobligatory initial, final (or both) consonant/ consonant cluster.

1.4.1 Structure of Syllable in English

In phonological representation, the syllable is considered to be the heart. That is, it is the unit basically functions to organizing a phonological system. Katmba (1989, p. 154) puts the phonological representation of syllable in the tree below:

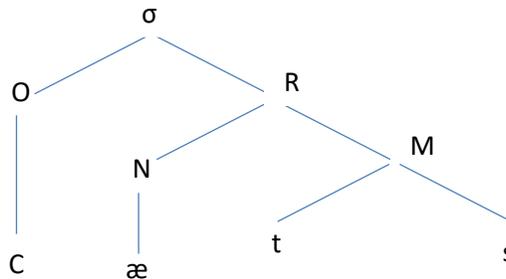
a – CVV (Cats) σ = syllable

o = onset (initial consonant/s)

R = Rhyme (the nuclear vowel + coda)

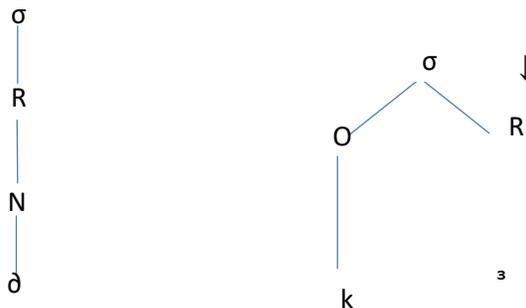
N = nuclear vowel

M = Marginal consonant/ consonant clusters



As shown in the tree, a mono syllabic word (one syllable word) consist of an onset and rhyme. Rhyme in turn consists of a nuclear vowel followed by marginal one or more consonants.

b – V – CV = Two syllable word (occur)



In the word stated above, two syllables are there. The first syllable, which seems to carry the stress, is of only a vowel. The second syllable is of an onset and a vowel.

C – CV_CV kittle



The third word consists of two syllables, each of which includes an onset and a rhyme of one vowel as in /kI/ or of a syllabic consonant which plays the role of a vowel. Syllabic consonants in English are /l, r/. Nevertheless, it seems a must to have a nuclear vowel for a syllable unit whereas onsets and consonants after the vowel are optional.

Note: All phonetic transcriptions adopted in this paper are adopted from Jones & Gimson's English Pronouncing Dictionary (1988).

1.4.2 Types of Syllables

In terms of stress, katamba (1989) states that languages are of two types: quantity sensitive and quantity insensitive languages. For Quantity sensitive languages, like Arabic and English, syllables are stressable according to their inner construction (syllable weight) whether a syllable is light or heavy. That is, heavy syllable are the formal candidates to receive stress. In determining heavy syllables, Yavas (2011, p.157) clarifies it as:

If the rhyme is non-branching (has a short vowel, and no coda),

the syllable is light. If, on the other hand, the rhyme is branching (has a short vowel, except [æ], which is weightless and cannot carry stress, followed by a coda (simple or complex), or has a long vowel or diphthong with or without a following coda), the syllable is heavy.

To exemplify this criterion, the following examples are to be considered:

cover /kʌvə/ 'kʌ (və) short vowel_ no coda
ex'treme /ri:m/ heavy (long vowel) → stressed

- **The syllable has a long vowel and a coda which makes it more prominent to be stressed.**

In addition to the subdivision of a syllable into light and heavy to assign stress on the heavy syllable another criterion is important to put in mind. Yavas (2011) further adds the significance of defining the syllable types according to their position. The last syllable is called (ult), the syllable before the last is (penult) and the syllable before penult is called (antepenult) as it is shown in the word possibility.

[pɒ sə bɪ lə tɪ] = [tɪ] → ult [lə] → penult [bɪ] → antepenult

The significance of these three positional categorizations of a syllable to word stress is that, in English, If the penultimate syllable is heavy in nouns, it tends to be stressed. For verbs, if the final (ultimate syllable) is heavy, it is to be stressed (Katamba, 1989).

1.5 Placement of Word Stress:

For many languages, it is not difficult to place stress within a word. Czech and French have a fixed only one rule governing lexical stress. As for Czech, the initial syllables are stressed. French has the final syllable stressed. However, it is not the case with English in which stress can occur with any syllable in a word (Davenport & Hannahs, 2010). English language, as well as Arabic and Russian, are stressed-timed languages. Kelly (2000) explains that, in these languages, stress takes place at regular spacing in that duration of an utterance is determined by the number of its accented syllables. To gain this harmony, unaccented syllables are produced shorter and vowels are reduced to schwa.

It is agreed amongst Kelly (2000), Katamba (1989) and Yavas (2011), that English stress assignment is variable and mobile but not random. Variety of pattern does not mean impossibility for setting, at least, tendencies rather than rules. Basically, Katamba (1989) suggests excluding grammatical words (unless they were long and complex) from being stressed. In other words, only content and lexical vocabulary are to receive stress. Another principle is proposed by Carr (1999) is that English does not allow the occurrence of a word where two initially neighboring syllables to be unstressed because this would violate the rhythmic contours of the language.

1.5.1 Nouns and Verbs Stress

Some words in English functions as both verb and a noun. For example, (present), it could mean (introducing something: v) or (a gift: n). As it is mentioned before, stress main function is a differentiatonal one. By stress, present can be marked as a verb as a noun by stressing the first syllable (Kelly, 2000)

PREsent (n.) preSENT (v.)

other examples are to be treated the same way:

`Import (n.) im`PORT (v.)

`Increase (n.) in`crease (v.)

1.3.2 Nouns and Adjectives

Regularly, nouns and adjectives are stressed in the same way as Yavas (2011) states.

- In disyllabic nouns and adjectives, stress is assigned on the penult (pre-final syllable) or the first syllable in dissyllabics:

 `DINner (n.) `ENTire (adj.)
 `COOKie (n.) `LOVely (adj.)

- If the penult (first syllable of disyllabics) is unstressable via /ə/, the stress goes to the (ult) final syllable.

 ma`CHINE (n.) comPLETE (adj.)
 app`EAL (n.) a`LIVE (adj)

- Some disyllabic nouns and adjectives doesn't obey the penult stress pattern, though the penult is stressable.

 sham`POO (n.) obsec`URE (adj)
 JuLY (n.) obs`CENE (adj)

- In trisyllabic nouns and adjectives, stress goes to the penult if it is heavy, if not, antepenult is stressed (the syllable before).

Trisyllabic

More than three syllables

 comp`UTER _ ABdomen ex`PERiment
 aG`ENDa _ `Africa as`TRONomy

1.3.3 Verb Stress

Carr (1999) states that disyllabic (two syllables) and polysyllabic (three syllables) verbs receive a final primary stress.

 main`tain inter`view inves`tigate

1.3.4 Prefixes and Suffixes

Simply and briefly, Kelly (2000) states that these are not accented in English.

 `LOvely de`CREASE
Exception, however, can be detected like:
 DISlocate , Bicycle

1.3.5 Compound Words

Compound words are a combination of two words like 'ice-cream, arm-chair, 'darkroom. The most dominant case is to stress the first element.

- If the first element is numeral or the second element is an adjective or verb Compound, the second part is stressed:

| | |
|---------------|--------------|
| bad-‘tempered | Three-‘weels |
| good-looking | overlook |

1.3.6 Complex words

When words are inflected with prefixes or suffixes to derive new words, stress normally move onto different syllables as in the examples:

| | | |
|-------------|------------------|---|
| diplomat | [ˈdɪpləmæt] | ↓ |
| diplomacy | [ˈdɪpləməsi] | ↓ |
| diplomatic | [ˈdɪpləmˈætɪk] | ↓ |
| origin | [ˈɒrɪdʒən] | |
| original | [ˈɒrɪˈdʒənəl] | |
| originality | [ˈɒrədʒənˈæləti] | |

Some other generalization to English Stress of words are proposed by Khalil (1999):

- Words that end with -ic, -sion, -tion receive stress on the penultimate syllable (second from the end):

ecLECTic revoLUTION posSESSion

Section Two: Lexical Stress in Arabic

2.1 Modern Standard Arabic and Standard English

As defined by Crystal (1992, p. 25), Arabic is “The chief member of the Semitic family of languages, spoken by over 150 million people as a first language in many countries of northern Africa and south-eastern Asia” Modern Standard Arabic is the official language of Koran, journalism and education system.

2.2 Stress in Arabic

Word stress in Modern Standard Arabic is of great importance to language learners, while precise stress rules can help enhance Arabic speech technology applications. Though Arabic word stress and vowel neutralization rules have been the object of various studies, the literature is sometimes inaccurate or contradictory. Most Arabic grammar books give stress rules that are inadequate or incomplete, while vowel neutralization is hardly mentioned. The aim of this paper is to present stress and neutralization rules that are both linguistically accurate and pedagogically useful based on how spoken MSA is actually pronounced (Watson, 2011)

The word stress of Classical Arabic has been the subject of debate. In any case, there's agreement as to the common run the show, indeed in spite of the fact that there are a few exemptions. A basic rule of thumb is that word-stress falls on the penultimate syllable of a word in the event that that syllable is closed, and something else on the antepenultimate (Versteegh, 1997, p. 90).

2.3 Word Stress and Stress Types in Arabic

In Arabic, stress is described as the compression, emphasis on a syllable within a word to make it clear in perception and higher than other syllables in the same word. The placement of word stress in Arabic changes significantly from one lingo to another, and has been the center of most of the recent researches:

In determining stress, Arabic distinguishes three types of syllables:

1. Light:

-An open syllable containing a short vowel (i.e. CV), such as wa 'and'

2. Heavy:

-An open syllable containing a long vowel (i.e. CVV), such as sā.fāra 'he travelled'

-A closed syllable containing a short vowel followed by one consonant (i.e. CVC), such as min 'from' or ka.tab.tu 'I wrote'

3. Super-heavy:

-A closed syllable containing a long vowel followed by one consonant (i.e. CVVC), such as bāb باب # 'door' or mā.dun 'stretching (NOM)'

- A closed syllable containing a vowel of any length followed by two consonants (i.e. CVCC, CVVCC), such as bint بنت # 'girl' or mādd# مد 'stretching'

2.4 Rules for lexical Stress Assignment

Khalil (1999) lists three general simple rules for placement of stress in correspondence to the types of syllables in Arabic:

1. The word receives final primary stress if the final syllable is CVCC OR CVVC:

CVCC قَبِلْتُ qabilt I accepted.

CVVC فَاقِرٌ faqiir a poor

2. The penultimate receives stress if it is CVV OR CVC

CVC مَلِكٌ Malik a king

CVV يَقُولُ yaquulu he says

3. The antepenultimate receives stress if it is a CV:

CV نَسِيَ nasa he forgot

Section Three**Stress in Arabic and English: Contrast**

Contrastive Analysis: is a hybrid linguistic enterprise which aims at producing inverted(contrastive) two valued typologies concerned with a pair of languages (James, 1980: 3). The aim is to find the differences and similarities. In the light of the descriptive review of stress system in both languages in question, some points appear to be prominent difference and similarity.

1. Both English and Arabic are stress-timed languages.
2. English native stress tend to be on initial position while Arabic tend to place stress normally at the end of a word. For instance, expert vs.
خَبِيرٌ khabi:r
3. English and Arabic in syllable structure. Arabic have no consonant clusters at the beginning and limited doubling of codas. For example:
strange vs ghāri:b
str غ
4. English words cannot have two unstressed syllable together at the word beginning. Arabid prefer final stress, even though two unstressed syllables take place at the beginning.
5. English has various rules according to the type of words and number of syllables, and also for compounding and derivations, all of which bear exceptions. Arabic, in turn, has only three fixed general rule for stress placement. Arabic place stress on the final heavy syllable.
6. Both English and Arabic are quantity sensitive languages where heavy syllables attract stress.
7. Syllables not sounds carry stress. Stress is used to distinguish a syllable from the preceding and following syllables for certain purposes (such as emphasis, contrast, etc).
8. Stress is associated with strong syllables and every word has only one primary stress.

Conclusion

Examining lexical stress between Arabic and Arabic can show that, Stressed syllables are recognized as stressed because they are more prominent than unstressed syllables by four factors: loudness, length, pitch and quality. Stress can be used simply to give special emphasis to a word or to contrast one word with another. English, Unlike Arabic, is variable and mobile. Arabic, in contrast, is predictable due to fixed patterns.

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