



Syllables in English and Arabic : A contrastive Study

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Abstract

The present study investigates syllables in both English and Arabic for the sake of revealing the similarities and differences between them in these two languages. The syllable is regarded as the basic unit or the building block of speech that has attracted the attention of English and Arab phoneticians. The present study tackles the nature of English and Arabic syllables, sheds light on some of the theories that described them as well as classifying them into types and describing their structure. The study arrives at the conclusion that there are many differences between syllables in English and syllables in Arabic. These differences concern the way syllables are viewed, their types and their structure. However, both languages consider the syllable to be the basic unit of speech. Phonetically, syllables are described in English as consisting of a centre which has little or no obstruction to airflow preceded and followed by great obstruction; whereas in Arabic, syllables are phonetically described as chest pulses.

Keywords: Syllable; Syllable Nature; Syllable Type; Structure

Introduction

The term syllable, in English language, is not easy to define since it can be defined phonetically, or phonologically or both phonetically and phonologically. Starting with Ladefoged (2006:242) who describes the syllable as “the smallest unit of speech. Every utterance must contain at least one syllable”. He (ibid.) further states that speech is composed of segments such as vowels or consonants and these segments are considered to be aspects of the syllable. Roach (2009: 56) describes the syllable as “a phonetic unit consisting of a center which has a little or no obstruction to airflow (i.e. a vowel sound)”. For Trask (1996:345), a syllable is “a fundamental



but elusive phonological unit typically consisting of a short sequence of segments, most typically a single vowel or diphthong possibly preceded and/or followed by one or more consonants”.

Katamba (1989: 153) believes that the syllable is a purely phonological entity. He (ibid.) states that “the syllable is at the heart of the phonological representation. It is the unit in terms of which phonological systems are organized”.

According to Crystal (2008:468-469), a syllable is “A unit of pronunciation typically larger than a single sound and smaller than a word”. However, Crystal (ibid.) believes that defining a syllable accurately is not easy since there have been many attempts to define it phonetically and phonologically. Phonetic approaches that define the syllable have the aim of postulating a definition that is valid for all languages. From a phonetic perspective, the syllable can be defined on the basis of the articulatory effort that is required to produce it. Another phonetic approach views the syllable from an auditory standpoint by making reference to the notion of sonority i.e. the relative loudness of sounds (see section 1.2.3). Phonologically, a syllable, is viewed in terms of “the ways sounds combine in individual languages to produce typical sequences”.

Related Literatures

Various Theories: The Prominence Theory affirms that “a syllable is phonetically a peak in prominence resulting from a combination of stress, length, pitch and intrinsic sonority” (Trask, 1996: 291). This theory is based on the fact that some sounds are more prominent than others and stand out from their neighbours. The prominences or peaks are illustrated by vowels and they correspond to the centre of a syllable. Accordingly, the number of syllables in a word is determined by the number of peaks it has. For instance, the word beautiful [bj'u:tlf^U] contains three syllables since it contains three vowel sounds i.e. three peaks of prominence /u: , l ,^U/ (Gimson, 1980:56).

The Pulse Theory (Chest Pulse Theory) is concerned with the muscular activity that controls the lung and occurs during speech. It is believed that increases in air pressure accompany the

chest pulses. Such chest pulses along with the increased air pressure determine the number of syllables in a word. This theory demonstrates that the syllable rather than the sound is the basic unit of speech. This theory does not account for words with two vowel sounds such as being / [b'i:lɪŋ]/ which contains two vowels; the first one is long while the second is weakly stressed. It is doubtful whether there is a double chest pulse even though the word is divided into two units linguistically (Gimson, 1980:56).

The Sonority Theory, according to which, the pulses of pulmonic air stream in speech correlate to peaks of sonority which is related to voicing. The greater the spontaneous voicing a sound has, the more sonority it has. Each syllable corresponds to a peak in the flow rate of pulmonic air. Thus, the nucleus elements are more sonorant than other segments. Speech sounds can be ranked in terms of their sonority according to sonority hierarchy in the following figure.

Least sonority

1	voiceless obstruents (e.g. t s k)
2	voiced obstruents (e.g. d g P z)
3	nasals (e.g. m)
4	liquids (e.g. r)
5	glides (e.g. w)
6	vowels (e.g. a 0) Greatest sonority

Figure. 1: Sonority Hierarchy (Katamba, 1989:104)

Research methodology

It is a study from English and Arabic documents, research articles related to Studying the nature of English and Arabic syllables, some theories that explain these theories as well as classify them into categories and explain the structure of language. How to view syllables, their types and structure

Research results

1. Syllables in English allow combinations up to four consonants i.e. consonant clusters; while



in Arabic, consonant clusters are not very common except for having two consonants as in (نرد) in which the consonant before the last 'moved' (mutaharrik) and the last consonant 'resting' (saakin).

1. English syllables allow only one vowel to be its nucleus while Arabic syllable can have two vowels standing as a syllable nucleus. This happens when the nucleus is a long vowel.
2. Arabic syllables may start with consonants or vowels while Arabic syllables have to start with consonants only.
3. In English, there are three theories that deal with the syllable in terms of sonority, prominence, and the muscular activity that controls the lung; whereas in Arabic, the syllable can be studied in terms of chest pulses, patterns of analytic molecules, structural units or specific shapes of quantities.
4. In English, syllables consist of onset and rhyme. The rhyme contains a nucleus (a vowel) and a coda (a consonant), while in Arabic there are six possible structures of syllables depending on the way the consonants and vowels are arranged.
5. Syllables in both English and Arabic are classified into open and closed depending on whether the syllable ends with a consonant (closed) or a vowel (open). Additionally, English syllables are classified into heavy and long syllables depending on its nucleus; whereas Arabic syllables are classified into long and short based on the number of sounds in a word.

Discussion of research results

Structure of English Syllables

Finch (2005:65) describes the structure of the syllable by saying that a syllable must contain a vowel sound that forms its nucleus. In addition to the nucleus, a syllable may have one, two, or three consonants preceding the nucleus. These consonants form the syllable onset. A syllable may have up to four consonants following the nucleus. These consonants form the syllable coda. Both the nucleus and the coda make up the syllable rhyme.

Roach (2009:56) states that not all syllables have both onset and coda. Some syllables have a coda without an onset like ease /i:z/, while others have an onset but zero coda like key /ki:/.

Some syllables start with two or more consonants i.e. a consonant cluster preceding the vowel. For instance, the word spray /sprei/ starts with three consonants. In this case the first consonant /s/ is called pre-initial, the second consonant /p/ is called initial and the final consonant /r/ is called post initial. If the first syllable of a word starts with a vowel, the initial syllable is said to have zero onset. (ibid.:57) Some syllables can also have a consonant cluster after the nucleus. For example, as in the word texts/teksts/. The first consonant /k/ is called pre-final, the second one /s/ is called final, the third consonant/t/ is called post final 1 and the last consonant is called post final 2. All of these consonants in the consonant cluster are part of the coda (ibid.:59) below which is the structure of the English word texts: Syllable

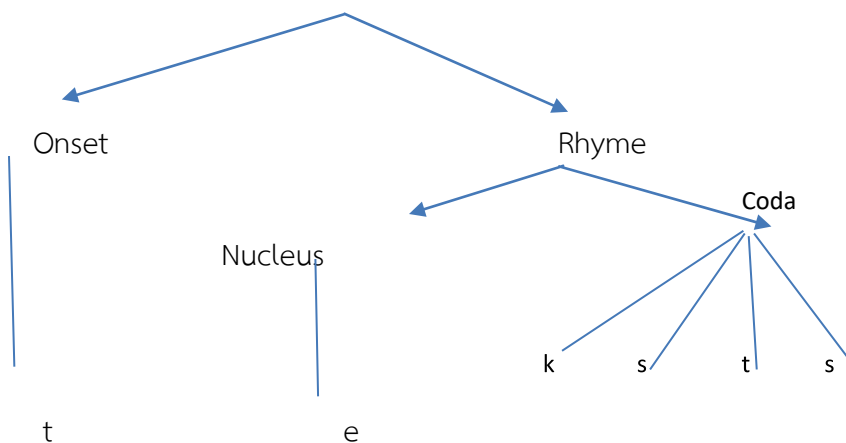


Figure. 2 The Syllable Structure of the Word Texts

Another way of representing the syllable structure is the generative CV-phonology model proposed by Clements and Keyser (1983) who have designed a CV-model of phonology to deal with the syllable. Clements and Keyser believe that the theory of the syllable has the task of stating universal principles governing syllable structure. In order to achieve that task, Clements and Keyser (1983) assume that the syllable has a three-tiered structure consisting of a syllable node 'σ'; a CV-tier whose C and V elements dominate consonant and vowel segments; and a segmental tier that consists of bundles of distinctive features which represent consonant and vowel segments (Katamba, 1989: 156). Figure two below shows the structure of the word pen based on a generative CV phonology model:

Syllable-tier

CV-tier

segmental-tier

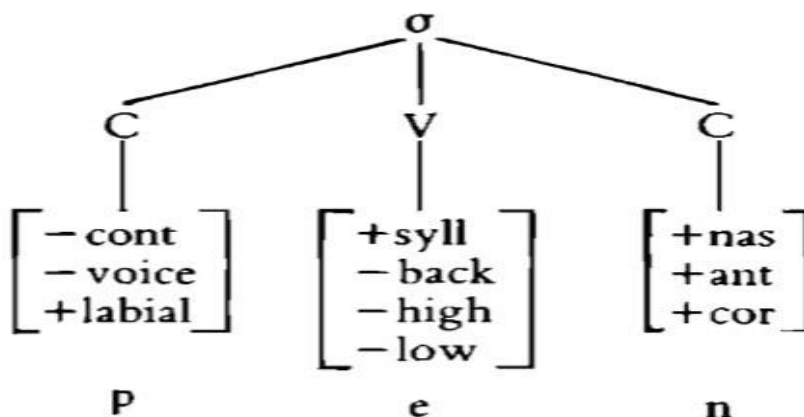


Figure. 3 Syllable Structure of the Word Pen (Katamba, 1989: 157)

Types: Reetz & Jongman (2009:33) state that the syllable end determines its type. If a syllable ends with a vowel (e.g. sea) it is an *open syllable* but if it ends with a consonant (e.g. seat) it is called a *closed syllable*. McMohan (2002:113) believes that such a subdivision of syllable type depends on the structure of the rhyme. A closed syllable has a coda, while in an open syllable the rhyme consists of a nucleus alone. the nucleus and coda are either simple, containing a single element, or branching, containing more than one: a branching nucleus would have a long vowel or diphthong, while a branching coda would contain a consonant cluster” for instance, late /leit/ is an example of a branching nucleus while twelfth /twelf θ/ is an example of a branching coda.

According to McMohan (2002:113) a syllable is either *light* or *heavy* “a light syllable contains only a short vowel in the rhyme, with no coda”. For example, the first syllable of report is an example of a light syllable since it has a zero coda and its rhyme contains a short vowel. A syllable is considered to be heavy if it has a complex rhyme. Complexity then can be attained in two ways. “First, a heavy syllable may have a short vowel, but one or more coda consonants, as in bet, best. Second, it may have a branching nucleus, consisting of a long vowel or diphthong; such a syllable will be heavy whether it also has a filled coda, as in beast, bite, or not, as in bee, by”. Roach (2009:64) uses different terminologies i.e. strong vs weak syllables to



refer to the same concept. He (ibid.) states that “the vowel in a weak syllable tends to be shorter, of lower intensity (loudness) and different in quality”. For instance, the word data /deitə/ contains two syllables the first is strong because it contains a diphthong, while the second is weak since it contains a short vowel /ə/.

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