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A Review of English Syllable Structure

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Abstract

The syllable is a phonological entity that is very significant in phonological representations, for it is the unit in terms of which phonological systems are organized with very significant restrictions on the ordering of the elements that make them up. This paper reviews the syllable structure of English and also explores the aesthetic role of the syllable for its onomatopoeic and sound effects which add variety and interest to text. There is no doubt that language manipulators consider sound patterns in their lexical selection. They also know that sound parallelism, when not ornamental, is used to link sound and syntax to create fun, humour and beauty in a text (written or spoken). The paper also shows that the syllable forms an important locus for stylistic experimentation in sound manipulation or sound patterning. It thus plays a pivotal role in everyday conversation, literary discourse in general and poetry in particular.

The Concept of English Syllable

The syllable, an aspect of non-segmental or suprasegmental feature of phonology, is a term that has not been satisfactorily explained, though explanation has been offered from a universal phonetic viewpoint and a phonological (specific language) viewpoint. From a specific functional viewpoint, it is said that when we speak, we produce vowels and consonants which are individual contrastive sound units of language. Since speech is a continuous activity, a speaker produces a chain of vowels and consonants, which may combine to form a larger unit called a syllable.

The Swiss linguist, Ferdinand de Saussure in his "*Cours de linguistique générale*" which was published in French in 1916, suggested that the syllable was based on the opening and closing of the vocal tract as the speaker moves from one sound to the next. Knowles acknowledges that de Saussure's "idea has an elegant simplicitywhich must be satisfactorily correct" (66). But as de Saussure himself pointed out, this basic idea does not account for all the patterns we might regard as syllables. Adetugbo has defined the syllable as "a unit of pronunciation larger than a single sounds but smaller than a word but that a single sound like any of the vowels can constitute a syllable" (66). So also can the single /m,n,l and r/; while words like say /sei/; hear /hiə/; come /kʌm/; go /gəʋ/ are made of a single syllable each.

When we speak language, it is the sound we pronounce; it is syllables, words and sentences. Thus, when we practise pronunciation, we start by putting the sounds into syllables and words. Syllables are separate sounds (consonants and vowels) that make up words.

Also Eka and Udofot say that a syllable is "the smallest unit of sound which can be uttered with one pulse of breath" (81) and Elugbe maintains that "a syllable is the minimum or shortest stretch of speech we can pronounce" (113).

Two or more syllables may also combine to form another unit which is called a word. The following vowels and consonants /1, e, u, r, p, t, g/ are some speech sounds of English which a speaker puts together in actual speech process to form words like "rig", "put", "trip", "pit" and a number of other words. These various attempts from the viewpoint of phonetics and phonology have been made in the explication of the syllable (cf Roach 1983, Eka 1996). With regard to phonetics, the efforts are in two: from the viewpoint of articulatory phonetics (the sounds are produced) and auditory phonetics (the way sounds sound). From the viewpoint of phonology, we are concerned with specific functional explications in terms of specific languages. The phonetic explanation may be said to be universal, covering all natural languages, while the phonological explanation or analysis is functional and linguistic in terms of a particular language.

The phonetic analysis of the syllable is based on two currently available theories. They are the "pulse" theory and the "prominence" or "sonority" theory (cf Gimson 1984 & Eka 1996).

In a phonological, specific, functional linguistic approach, the syllable may be explained taking into cognizance the phonological rank scale of the tone group, the foot, the syllable and the phoneme (cf Halliday et al 1970:45), and looks also at the possible combinations of the English phonemes; while Eka has also said that from the phonological viewpoint the "syllable is that unit of phonological description which comes between phoneme and foot. It may be made up of one or more phonemes while the foot is made up of one or more syllables" (104).

The syllable is important to this study because it is the domain for the occurrence of consonants, consonant clusters and vowels

The Structure of the English Syllable

The English language is used here because languages vary in their syllable structure. Syllable structure refers to the peculiar arrangement of consonants and vowels in a given syllable. The English language operates a syllable structure that can be specified as $(C_{0.3})V(C_{0.4})$ with the brackets indicating optionality. This means that the syllable in English can have an onset made up of no consonant at all or up to three consonants, an obligatory vowel as the peak, and a coda made up of no consonant at all or up to four consonants. According to Roach "what we might call a MINIMUM syllable would be a single vowel in isolation, for example, the word "are" /a:/, "or" /o:/, "err" /3:/ (67). These are preceded and followed by silence. Isolated sounds such as "m", which we sometimes produce to indicate agreement or "sh"/f/, to ask for silence must also be regarded as syllables. The nuclear structure of the syllable is V. The syllable may have consonant onset, (that is, it may have more than just silence preceding the centre of the syllable). A vowel peak may not be followed by a consonant coda as in "bay" /bei/, "be"/bI,bi:/, "bar"/ba:/. The structure here is CV, and syllables with this structure are classified as open syllables because of lack of coda. Syllables may have no consonant onset but have coda: for instance, "am" /æm/, eaze /I:z/ with the structure **VC**. Some syllables have both an onset and a coda. These are syllables with a consonant onset, a vowel peak, and a consonant coda as in "bat"/bæt/, "run" /rAn/, the syllable structure here is **CVC** and is also called a closed syllable. Consequently, all phonological words must contain at least one syllable, and hence must contain at least one vowel.

The structure of the syllable in English shows that if the first syllable of a word begins with a vowel, any vowel may occur, though $/\sigma/$ and /u/ are rare. It is said that this initial syllable has a zero onset. If the syllable begins with one consonant, the initial consonant may be any consonant phoneme except /3/ which is rare and/ $\eta/$ which is not found.

English syllable structure can be illustrated as follows:

Words	Segments/sounds	Syllable Structure
Eye/ I	/aɪ/	V
Pay	/peɪ/	CV
Spay	/spei/	CCV
Spray	/sprei/	CCCV
Eat	/1:t/	VC
East	/1:st/	VCC
Asks	/a:sks/	VCCC
Sack	/sæk/	CVC
Six	/sɪks/	CVCC
Sixth	/sɪksθ/	CVCCC
Sixths	/sɪksθs/	CVCCCC

In a short formulaic notation the English syllable structure may be summarized as follows:

$$S {\rightarrow} (\mathbf{C}_{0\text{-}3}) \mathbf{V}(\mathbf{C}_{0\text{-}4})$$

There are words of one, two, three, four and polysyllables where each syllable has a vowel as the peak.

ONE SYLLABLE

(a) Beet Rice Zone

TWO SYLLABLES

(b) Bit-ter Tu-lip Wan-ted

THREE SYLLABLES

(c) Yes-ter-day Im-por-tant So-lu-tion

FOUR SYLLABLES

(d) Ca-ta-to-nic

According to Durranand Stewart (2003), "when writers use lots of onesyllable (monosyllabic words), it helps to create a hard, blunt or even angry tone, or a direct simplicity. When they use words with several syllables (polysyllabic), they can create a sense of sophistication, eloquence or technical complexity – like that" (106).

In some syllables, however, a consonant can function as the nucleus of the syllable especially if the syllable has no vowel. Special consonants perform this function in English and they are referred to as "Syllabic Consonants". The common syllabic consonants in English are [I] and [n]. These two sounds function basically as consonants of English but if any of the two consonants occur in a syllable which has no vowel, it may serve as the nucleus of the syllable and therefore is said to be syllabic.

The Functions or Roles of the Syllable in English Phonology

The syllable was not given a place in the early theory of generative phonology, although the feature (syllable) was used. Subsequent work (for

example, Hooper 1972, Vennaman 1972, Selkirk 1980 and Knowles 1993) showed that the place of the syllable is secure in phonology.

The basic function of syllables is that of the syllable as the phonotactic unit that is, phonotactic regulation (patterning of phonemes), regulating the ways in which lower level of units (consonants and vowels) of the phonological hierarchy can combine. Harley says that "the phonotactic rules of English mean that certain kinds of consonant sequences are very likely to occur at the beginnings and ends of words, and hence at the beginnings and ends of utterances" (75). Whenever the sounds of English combine to form syllables, or words, these sounds are arranged in such a way that they must form acceptable sequences, for instance, a sequence like "trap" or "prat" can be formed but the language does not permit a sequence like "aptr" or "artp".

The parts which the English syllable may have with their operational term are as follows:

- (a) The Onset (the opening segment of a syllable) for instance, /tr-/ in "trap"/træp/ (CCVC structure)
- (b) The Centre, Peak or nucleus (the central segment of the syllable) for instance, /æ-/ in "and" /ænd/ (VCC structure)
- (c) The Coda (closing or arresting) segment of the syllables for instance, /-fl/ "awful" /o:fl/ (VCC structure) (cf Crystal 1991 & Adetugbo 1993).

The syllable also has the function of being used in metred poetry; that is two lines of poetry that scan, that is, that fall into a regular rhythmic pattern, usually have the same number of syllables and as well as its serving as the unit of phonological hierarchy in terms of which the behaviour of higher units of the prosodic hierarchy such as stress, tone and duration is stated. It is also used in hyphenation convention in written English.

Consonant and Consonant Clusters

Consonant and consonant clusters are important to this study because they are the domain for the occurrence of the syllable. English consonants are an aspect of segmental phonology which can be defined phonetically and phonologically. Phonetically, consonants are those sounds whose realization is always followed by some obstruction. It can be partial or total obstruction of the airflow; while, phonologically, Crystal says that consonants "are those units of sounds which function at the margins of syllables, either singly or in clusters" (74).

Speech depends upon consonants for its distinctness, firmness and verve. Consonants do for speech what the skeleton does for the living body. Consonants are one of the aspects of the basic sounds in natural language, which may be said to be the building blocks for the purpose of communication, the other being vowels.

Consonant clusters are comparatively rare in the languages of the world (cf Maddieson 1999). Many languages do not have clusters, and even those which do, prefer simple syllable onsets. In Nigerian languages, clusters hardly ever occur, but you cannot go far in saying anything in English without having to pronounce a cluster. There is a consonant cluster when two, three, or more consonants are together, that is, in a sequence. And each of these consonants uses its own sound. When a word is pronounced, one can hear the sound of each consonant that is in the cluster. Therefore, a consonant cluster stands for a blend of two sounds. In "drive" for instance, the cluster /dr/ records /d/ blended with /r/. Each sound blends itself with the next sound with no stops or pauses until one has sounded the whole syllable or all of the one – syllable word. One must just be sure not to stop or pause or say a word like "uh" between the sounds of the consonants. Consonant clusters are not separated by a vowel. Consonant clusters can be difficult for the learner of English to pronounce.

There is a great variety of clusters in English which have /l/ or /r/ as the second consonant. They are common:



This gives a total of fifteen (15) clusters. Here are some examples of initial two consonant clusters:

black // blæk/

clean ___/klin/

Some three consonant clusters:

Scream ___ /skri:m/ splash ____ /splæſ/

Some Consonant clusters in the middle of words:

Sur-prise _____ /səpraız/

 $In\text{-struct} _/Instr\Lambda kt/$

Some consonants cluster at the end of words:

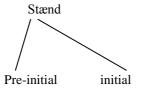
remnant ____/remnənt/ remould ____/rɪ:məʊld/ brink _____ /brink/

Some English words manifest the clusters only when they are pronounced but not merely by looking at the written form of the words.

Some examples are:

Using Roach's approach to the consonant clusters, we have initial two consonant clusters, which are of two sorts in English. One sort is made up of **S** followed by a small set of consonants, for example, stand /stænd/. The **S** in these clusters is called the Pre- initial consonant and the other consonants (t, w, m) in these examples:

"stand" /stænd/; "sweet" /swi:t/; smart /sma:t/; the initial consonant, for example :



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(Adapted from Roach 1997:71)
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The other sort begins with one of a set of about fifteen consonants, followed by one of the set l, r, w, j, as in, "plan"/plæn/; "tray"/trei/; "queen" /kwi:n/; "few"/fju:/. The first consonant of these clusters is called the initial consonant and the second the post – initial, for example, /kwi:n/



These examples above show some of the combinations of consonants in the clusters.

To sum up, we may describe the English Consonant clusters as having the following maximum phonological structure:

Pre-initial, initial, post-initial, Vowel pre-final, post-final₁ post-final₂ post-final₃



(Adapted from Roach 1997:72)

Speakers of English should always recognize these clusters, wherever and whenever they occur in a word and pronounce them correctly without inserting a vowel between any cluster. They should recognize the flexibility which the language demands, because it is not static. In many words of English, consonant clusters are only manifested when such words are transcribed or pronounced. Consonant clusters also occur whenever one word ends with a consonant and another begins with a consonant, for example, "...just cause"; two consonants, "...between the" three consonants, "...red dress", four consonants, "...takes place" "...and grown", five consonants, "...requirements stated". The technical name for this is **Juncture**.

The Role of Consonant Clusters in the English Syllable

Languages differ considerably in the manner and type of consonants (phonemes) that are allowed to combine well formed in the syllable. In order to survive in a language, clusters need to satisfy certain universal conditions, expressible in terms of phonotactic preferences, which derive the preferred clusters for all positions within a word. Their functions are on the one hand, to counteract the CV – only preference and, on the other, to counteract, the creation of dysfunctional clusters.

According to Knowles "some consonant clusters occur marginally in the syllable structure of English language with clusters as complex as (C) (C) (C) V (C) (C)(C)(C), so that we consider the word "strengths" /stren θ s/ to consist of just one syllable" (68).

This clustering of the consonants or its occurrence marginally in the simple or basic syllable structure helps in the formation of sounds in a language. In our everyday experience of language, the sound is normally a vehicle for the transmission of meaning.

It can be said that the role of the consonant cluster in the English syllable is its consistency in the sound it represents. In poetry, as well as advertising texts (Jingles), for instance, an attempt is sometimes made to bring the "sounds" of the text out of the background and to create some kind of recognizable pattern that is pleasing or appropriate to the sense.

Consonant clusters have the aesthetic properties of sound patterns, which depend on several factors such as Onomatopoeia, Phonaesthesia including rhythm and parallelism, and also on the auditory effect of individual phonemes (consonants). Normally, the sound has a conventional and arbitrary relationship to the meaning. It must be emphasized that this connection between sound and meaning is found only in exceptional cases. For instance, there is no connection between the sequence of phonemes /Altra/; /Agli/ and the meaning "ultra"; "ugly" beyond the fact that the English language uses the one to refer to the other. Also the sequence of consonant clusters, medially [- gl-] does not have the expressive power as in

Phonaesthemes, where [gl -] clusters at the initial position in the syllable structure produces an effect. However, Onomatopoeia and Phonaesthemes are expressive only when the meaning allows it to be: /gl/ a consonant cluster at the syllable onset does not suggest meaning of light in "glottis", "globe", "glove" but it suggests light in "glimmer", "glitter" "gleam" as some cases of Phonaesthemes (cf Knowles 1993).

This consistency of consonant clusters in sound formation can also be seen in the complex syllable structure called the AUGMENTED Syllable while the simple type (the basic syllable) which contain an opening sequence optionally followed by a closing sequence. In augmented syllables, the basic syllable is augmented by additional consonants following the loss of a vowel, particularly at the onset (beginning) or Coda/Close (end) of an accent group. The resulting syllable structure is treated by speakers of English as a single syllable, and consonants are run smoothly together even though they are not properly ordered in opening and closing sequences. As can be seen, the vowel can be lost from a leading syllable, for example, the loss of [o] in "tomato" /tma:təu/ and in "potato" /pta:təu/. The first consonant is now added to the onset of what was previously the second syllable. Although, /tm; pt/ is not normally a permissible onset, it certainly does occur as a result of this process of syllable loss (in connected rapid speech). Augmented clusters of this kind can become a model of clusters in new words, possibly words borrowed from other languages (Knowles 109 -110)

The role of consonant clusters in the structure of the English Syllable is also that of efficiency in speeding up the decoding process of words since certain pairs of consonants appear frequently in syllables

In addition to promoting efficiency, familiarity with consonant clusters can also help with syllabication, for example, knowing that t and r often appear as successive letters in syllables assists with the syllabication of words as in the following: pantry (pan/try); contrive (con/trive).

In conclusion, the importance of consonant clusters placement in a syllable is that it helps in pronunciation in English language. Though it is not a characteristic of some Nigerian languages' syllabic structure like Igbo and Yoruba where the insertion of the vowels to the borrowed words from English to the languages are by adaptation, for example, the English words borrowed into these languages bread and milk are pronounced by less educated speakers as /buredi/;/miluku/ and /burEdi/;/miliki/ in both stated languages respectively.

The Special and Aesthetic Role of the Syllable in English Language

The syllable as we know belongs to the non-segmental phonology. The syllable is the smallest of groups and is the combination into which sounds enter in connected speech. Basically, the general roles of the syllable in the sound patterning of English are those of principle of the syllable, that is saying what kinds of syllable are well formed according to the normal rules of the language; which consonants can precede or follow the syllabic, with the restriction that /h/ cannot end a syllable and an /n/ cannot begin one; the allophones and their occurrence, or distribution, and that of vocalization. But there also is a rather special and aesthethic role of the syllable which focuses on some forms of humour and enlivens the speech or text that would for most speakers and readers, be a fairly unexciting piece. It explores the ways in which people and writers bend it, play with it, and sometimes even break the rules in their quest to communicate. It is the way a sound of a literary text and everyday language/speech can be manipulated for humour through creativity. Everyday language apart from literary texts is richly creative, and that such creativity as Carter says "is not the exclusive preserve of the individual genius, that, fundamentally, creativity is also a matter of dialogue with others" (11). It is called Phonetic/Sound Parallelism or Sound Patterning.

A Parallelism according to Knowles "is a stylistic device, which highlights two or more items which are substantially similar but which differ at some point. To be effective, Sound Parallelisms need to involve phonemic patterns in structures at least as big as the syllable, rather than just unorganized strings of phonemes" (84). The parallelism is used for effect in the spoken or written texts.

There are several kinds of sound patterning, namely:

(i) Rhyme: Rhyme has been said to be words that end with the same sound. Rhyme according to Knowles "highlights two syllables with the same closing sequence, e.g. great/bait...rhyme is usually restricted to a simple syllable, but it can sometimes extend over a strong syllable and a following weak syllable e.g. roses/noses"(84). While Elugbe says that "rhyme refers words sounding alike, though not necessarily identical even when their spellings differ for example bier/beer; fate/gate; love/dove, on the other hand, words spelt identically will not form a rhyme set if they sound – that is, they are pronounced – different for example cough/tough "(189) and Jowitt gives the rhyming rule as "two words rhyme with each other when they have (1).the same final vowel, or(2).the same final vowel + consonant(or consonant cluster) sequence"(14).

- (ii) Alliteration: This is where words close to each other begin with the same letter, that is, segments before the syllabic are similar. Some of the examples can be seen in the Tongue Twister section.
- (iii) Sibilance: It is the repetition of "s" sounds in writing or speech to create a hissing effect. For example, Sue sells seashells on a sea shore.
- (iv) Assonance: It is where words close to each other contain the same vowel sounds. For example, With dying light the silent fall of night.
- (v) Consonance: It involves agreement in post vocalic consonants, for example, send/hand; best/worst; last/first
- (vi) Reverse rhyme: a reverse rhyme is the type of rhyme that starts/begins with the same sound or that which includes the syllabic as well as, for example, lash/last
- (vii) Pararhyme: Pararhyme exists if all the consonants in the parallelism agree. It is basically a combination of alliteration and consonance. Pararhymes occur quite commonly in everyday words and expressions, neologisms such as brain drain;tit tat; blim-blam; click clap; tick tock; lash/lush;flash/flush, etc. In many cases these examples are onomatopoeic noise words. Most pararhymes are monosyllabic. Short monosyllabic words are easier to rhyme than long polysyllables.
- (viii) Onomatopoeia: An onomatopoeic word is one which sounds like what it describes. For example, rustle, bleat, snip, crash, squelch etc.

There are other factors of sound patterning that have aesthetic properties apart from parallelism, they are rhythm and the auditory effect of phonemes like is also the case that the syllable or parts of the syllable can be used expressively, which gives what is called or termed Phonaestheme. However, as in the case of Onomatopoeia, "a phonaestheme is expressive only when the meaning allows it to be" (Knowles 114).

Sound Parallelism is valued for its own sake in everyday language. In literary and non-literary language, on the other hand, and especially in poetry and media texts, it needs to play some kind of constructive role, if it is to be taken seriously. When we evaluate Sound Parallelism, we can keep to the phonetic level, and for example, argue whether or not "shaft" rhymes with "daft"

The Poetic/Stylistic Functions of Sound in English Texts

The reasons given here will not apply to every poem/text you come across, but they can give an idea of the range of effects, sounds, consonants and consonant clusters can have. Some reasons poets/writers/Copywriters/speakers have for using sound and metrical patterning will include:

- (a) For aesthetic pleasure: sound and metrical patterning are fundamentally pleasing, in the way that music is; most people enjoy rhythms and repeated sounds. Children in particular seem to like Verse and nursery rhyme for this reason. It is also used in Tongue Twisters as these examples portray:
 - (i) Plantain planter planted a plantain in a plantain plantation.
 - (ii) Grace the grazier grazes the grass-cutter gradually on the grand green grass.
 - (iii) Frederick fried free fresh French Fries for five French friars from France.
 - (iv) Walter works at a waxworks and wax won't wash off without warm water.

Apart from these being Tongue Twisters, they also are cases of **Alliteration** of consonant sounds which could be singly or in clusters.

- (b) To conform to a convention/style/poetic form:- as with clothes and buildings, poetry and media texts (Jingles) have fashions, and different forms of sound patterning have been popular at different times.
- (c) To experiment or innovate with a form:- poets/Copywriters innovate to create new poetic/stylistic forms, and also to challenge

assumptions about the forms of language which are considered appropriate to poetry/texts.

(d) To demonstrate technical skill and for intellectual pleasure:- there is a kind of satisfaction to be derived from the cleverness of some poem/media texts (Jingles) and the magic of form and meaning being perfectly combined.

Conclusion

The attempt in this paper has been to review the English Syllable in a way to familiarize the students of English Phonology with the syllable, and foreground its importance to the writers' and students' ability to speak better and present their written work in a more creative way to arouse the interest of readers/listeners. It has been demonstrated that the syllable is more than a theoretical entity and that put to play (practice), it can also engender laughter, tears, wonder and joy. A brief discussion of someskilful uses of the syllable has also been carried out in order to sensitize the writers and students to the fact that the use of syllables requires ingenuity and versatility. It involves having fun with the sounds of the words to create pleasure and humour to the spoken or written texts. It also helps the students of English who wish to improve their pronunciation and sharpen their listening skills in listening comprehension.

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