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A CONTRASTIVE ANALYSIS OF FINAL WORD SYLLABLES IN ENGLISH AND STANDARD KURDISH

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Abstract

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English and Kurdish languages have different ways of dealing with the syllable according to each language's unique system. Every syllable should have a nucleus, onset, and coda that are subject to language particular variation. The production of syllable shapes in specific languages may vary widely: some of the subparts can be obligatory. For example, onset and nucleus are required in many languages but the coda is optional as in English syllables, only the nucleus is compulsory, that is, each syllable must contain a nucleus. While syllable onsets and codas are optional. In the Kurdish language, the onset is required to be filled by only one consonant, i.e. no consonant cluster is allowed in the onset, and only two consonants are allowed in the coda. So, the various numbers of segments in the onset and coda increase the number of syllable types in each language. Dealing with the numerous structures of syllables at the end of words needs more elaboration. Thus, this paper clarifies each one in detail in the below sections. At last, the similarities and differences between English and Kurdish final words are identified. The examples of Kurdish final words are based on the Latin script. It is concluded that both languages share some similarities and they have some differences.

Key Words: Syllable, Structure, phonetic, phonological, Onset, Coda, final syllable.

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Introduction

English and Kurdish languages each have unique approaches to dealing with syllables. Nevertheless, both languages treat the syllable as the phonetic components that make up words, a fundamental unit of organization for a sequence of speech sounds by segmenting them in a rhyme of strong and weak beats, and a component that affects a language's prosody, stress patterns, and rhythm.

Every word in English and Kurdish languages consists of at least one syllable, and many words have two, three, four, or more syllables. It is hard to define the syllable, but it is easy to recognize. Anyone can tell the number of syllables in, for example, pat, reply, and geography, but no one knows the precise physical action the speaker performs to produce a syllable.

According to Phoneticians, a syllable corresponds to one jaw opening-closing cycle or to one contraction of the muscles that support breathing (a "chest pulse"), but these hypotheses were not supported. One possible response is that a syllable is defined as a vowel and its surrounding consonants. This definition applies to the majority of the syllables including those in words like "pin," "print," and even "sprints.". A syllable doesn't necessarily need to contain a vowel, for example, the word "hidden" is usually pronounced as [hɪdn□], with the tongue firmly lodged on the alveolar ridge between the [d] and the [n]—there would be no denying that it has two syllables because there is no opening for a vowel between the two consonants (Zsiga, 2013).

Phonologically speaking, a syllable is described by Laver (1994, p. 39) as "a complex unit made up of a nucleus and marginal elements". Nucleus elements are vowels or syllabic consonants. In the 'one-word syllable' try [traI] the diphthong /aI/ is the nucleus element; while the initial consonant cluster which consists of [t] and [r]are the marginal elements.

According to some researchers, the term "syllable" should not be used in a phonetic or phonological sense, but rather to refer to a language unit made of phonemes ordered according to certain phonotactic criteria (McCarthy 1978, p, 107).

This paper divides into two parts The first part would discuss the final word syllables in English and weighs up the arguments for the final coda views. The second part is dealing with syllables in the Kurdish language. Then concluding the paper by explaining the similarities and differences of final syllables in both languages.

Syllable Structure

O'Connor states that the nature of a syllable structure varies from one language to another although there is no universal phonological syllable (1973, p, 201). Three places are used to analyze the syllables that potentially form words. The minimal type of syllable is composed of only a vowel, e.g., eye /aɪ/, owe /oʊ/. Then, the vowel is considered a central part of any syllable and is in peak position (also called syllabic, syllable-medial, and nuclear). Also, there may be one or more consonants before the vowel, e.g., tie /taɪ/, sty /staɪ/. This position is called the onset (also called syllable-initial or releasing). Moreover, there may be one or more consonants after the vowel, e.g., isle /aɪl/, isles /aɪlz/. This position is called the coda (also called syllable-final,

offset, or arresting). Table 2.1 shows various possibilities: C stands for a consonant, V for a vowel, and O for an empty position. Syllables with an empty coda position are called open syllables, but closed syllables have final consonants. (Reed and Levis, 2015, p, 88).

Table 2.1 Syllable structure of various English words (Reed and Levis, 2015).

Word	Onset	Peak	Coda	Formula
Eye		aɪ		OVO
Isle		aɪ	l	OVC
tie	t	aɪ		CVO
tile	t	aɪ	l	CVC
isles		aɪ	lz	OVCC
sty	st	aɪ		CCVO
style	st	aɪ	l	CCVC
tiles	t	aɪ	lz	CVCC
styles	st	aɪ	lz	CCVCC

Furthermore, two types of English syllable structures can be divided into two types: a phonetic syllable structure and a phonological one.

Phonetic Syllable Structure

The phonetic syllable structure includes three phonetic parts: the onset, the peak, and the coda (Hyman, 1982, p. 188). Sequences of segments according to a phonetic syllable depend upon an inherent hierarchical scale of sonority. Hawkins claims that the nearest sonorous segment occupies the nucleus and farther from the nucleus on either margin the least sonorous, the sounds will be optional consonants (1984, p. 66)

Phonological Syllable Structure

Regarding phonological theories, they are concerned with the internal structure of a syllable that is thought to be shared by all languages in the world. A syllable consists of an onset and a rhyme, which also

can be divided into a nucleus and a coda (Gut, 2009, p. 76).

In English syllables, only the nucleus is compulsory, that is, each syllable must contain a nucleus. While syllable onsets and codas are optional in English: syllables may or may not have an onset and a coda. For example, the syllable on does not have an onset, whereas tea is a syllable without a coda. The shortest syllables in English consist of only a vowel as a nucleus, for example, I, a, and oh. In some cases, a consonant can have the function of a syllable nucleus in a word. For instance, in the second syllable of the word button. The word consists of two syllables /bʌ.tn̩/, with the first syllable comprising the onset /b/ and the nucleus /ʌ/ and the second syllable comprising the onset /t/ and the nucleus /n/! Only nasals and liquids (/n, m, ŋ, l, r /) can function as the syllable nucleus - they are called syllabic consonants (Gut, 2009).

Phonetically speaking, syllables include a centre, which has little or no obstruction to airflow, and before and after this centre, there may be a greater obstruction as in eye [ʻaI], in [ʻIn]. more [mʼɔ:]. In contrast, phonologically, consonants always occupy the margins of the syllable structure, and it happens that a consonant takes the position of the nucleus of the syllable as in syllabic consonant (Gimson, 1989, p. 54).

Phonotactics of English Syllable

The word phonotactics is defined by Crystal as ʻA term used in phonology to refer to the sequential arrangements (or tactic behavior) of phonological units which occur in a language – what counts as a phonologically well-formed word.ʼ (2008, p. 366). There are restrictions to the arrangement of consonants and vowels. For example, the only sound that cannot occur in English codas is /h/. Also, two other sounds, /j, w/, and are commonly included among the consonants that are prohibited from appearing in codas (Yavaş, 2011, p,142). The general formula would be stated as:

(C) (C) (C) V (C) (C) (C) {C}

This characterization signifies that a V (vowel or diphthong), which is the nucleus, is the only obligatory element in an English syllable (e.g. a [e]). The surrounding consonants in parentheses are optional elements. So, a V can have a single, double, or triple onset with one, two, or three consonants before it as in CCCV (spray). Also, C can be added as codas as in VCCC (next). Beyond these, the following are also possible if include suffixes would be included:

CCCVCCC in the word (sprints)

CVCCCC in (worlds)

CCVCCCC in (twelfths)

CCCVCCCC is a logical possibility with no commonly occurring vocabulary.

The picture above is still very general and does not include our numerous restrictions on onsets and codas (Yavaş, 2011, pp. 139-140).

Final Word Syllables

the structure of a one-syllable or one-morpheme word shows that such a word has one vowel and may begin with zero, one, two, or three consonants and may end with zero, one, two, or three consonants. Concerning which consonants can occur together initially, finally, and between vowels, and what sequences of vowels and consonants are possible needs clarification. The description which follows the other is a matter of constraints on the occurrence of consonants: certain sequences of consonants are possible in English words while the other sequences are not (Kreidler, 2004, p. 88).

In addition, Roach provides a thorough and detailed account of the final word syllables, which are primarily consonant clusters of up to four consonants. To start with, if there is one consonant only, this is called the final consonant which may be any consonant except (h, r, w, and j). If a word ends with two consonant final clusters, it can be one of the types: 1) a final consonant preceded by a pre-final consonant of the set /m, n, l, s/ as in bump /bʌmp/, bent /bent/, belt /belt/ and ask /a:sk/, and 2) a final consonant of the set /s, z, t, d, and ɵ /. It can be seen in bets /bets/, beds /bɛdz/, backed /bɑkt/, bagged /bag d/, and eighth /eltɵ /. Roach classifies these post-final consonants as separate morphemes and these are so as they refer to one of the following cases:1) plurality, 2) adding the past morpheme, or 3) using ordinal numbers. (2000, p. 71-2).

To give a complete picture of initial (onset) and final (coda) clusters in English, the following sources have been used: Heinz J. Giegerich (1992) who sorts out consonant clusters in terms of generative phonology, Peter Roach (2002) whose analysis of possible phoneme combinations are based on more traditional structural approach, San Duanmu (2009) who provides Giegerich's and Roach's descriptions of the phonotactic possibilities of English with the aspects of Optimality Theory and gives the reliable statistical data, Yavas (2011) who explains some restrictions on having coda in English, and Kreidler claims that 'in English, there are never more than two vowels in sequence in a single word (as in neon, poet, cruel, radio),' (2004, p. 71) while more than three consonants are possible. Still, there are constraints (Yavash, 2011). These constraints are explained by Phonotactics which is explained above. And this site is used for some lists of consonant clusters (Tedpower, 2007). Thus, the list of final syllable codas would be the following:

Codas

Codas are those elements that follow the nucleus in the same syllable (O'Grady, Dobrovolsky, & Aronoff, 1997, p. 76), i.e., the coda consists of any final consonants (Ladefoged & Johnson, 2011, p. 248). For example, the word bad consists of onset b nucleus a coda d.

Double Codas

The following generalization can be made about double non-suffixed English codas:

(a) C1 is a nasal and C2 is an obstruent (no voiced obstruent permitted except /d, z, ʤ/). Nasals (C1) combined with stops (C2) are invariably homorganic (two sounds that have the same place of articulation)

(b) If C1 is /s/, then C2 is a voiceless stop. ʒ/

(c) C1 is a liquid (/l, r/) and C2 is any consonant except for /z, ʒ/ ð/. Also non-existent is the /lg/ cluster.

(d) If C1 is a voiceless non-alveolar stop (/p, k/), then C2 is a voiceless alveolar obstruent (/t, s/). Also permitted is the /ft/ cluster.

Adding clusters formed by suffixes greatly increases the possibilities /t, d, s, z, ɵ/ (past tense, plural, possessive, ordinals, etc.).

The sonority sequencing principle is different for onset sequencing and codas. This means that optimal codas should have the sonority level as moving from C1 to C2. Indeed, this is the case for the double codas, it can be found in non-suffixed (monomorphemic) forms in English (e.g. arm [ɑrm], sharp [ʃɑrp], belt [bɛlt]). Exceptions are (a) two-stop sequences, which are never homorganic (e.g. apt [æpt], act [ækt]), and (b) stop + /s/, which always agree in voicing (e.g. lapse [læps], tax [tæks]). These explanations would be more clear in the following examples:

Beginning with oral plosive / p / followed by / θ, t, s /, as in:

pθ - depθ = depth

pt - stɒpt = stopped

ps - tæps = taps

Beginning with oral plosive / b / followed by /d, z / as in:

bd - rɒbd = robbed

rʌbd = rubbed

bz - kʌbz = cubs

Beginning with oral plosive / t / as followed by /s,/ as in:

ts - kΛts = cuts

mæts = mates

Beginning with oral plosive /d/ followed by /z/ as in:

dz - wʊdz = woods

Beginning with oral plosive /k/ as by /θ, t, s / as in:

kθ - kθəʊnɪən = chthonian

kt - wɜːkt = worked

ks - tɔːks = talks

Beginning with nasal plosive / ŋ / as followed by /d, z, k/ as in:

ŋd - rɒŋd = wronged

ŋz - siŋz = sings

ŋk - bæŋk = bank

Beginning with fricative / f / followed by /θ, t, s/ as in:

fθ - fifθ = fifth

ft - left = left

fs - snıfs = snifs

Beginning with fricative / v / followed by /d, z / as in:

vd - seivd = saved

vz - knives = naivz

Beginning with fricative / θ / followed by /s/ as in:

θs - miθs = myths

Beginning with fricative / ð / followed by /d, z/ as in:

ðd - ri:ðd = wreathed

ðz - bri:ðz = breathes

Beginning with fricative / s / followed by /p, t, k/ as in:

sp - wasp = wɒsp

st - last = lɑ:st

sk - ask = ɑ:sk

Beginning with fricative / z / followed by /d/ as in:

zd - surprised = səpraizd

Beginning with approximant / l / followed by /p, f, θ, t, d, s, z, k/ as in:

lp - plup = pʌlp

lf - pelf = pelf

lθ - health = helθ

lt - knelt = nelt

ld - wɜ:ld = wild

ls = fə:ls = falls

lz = hilz = hills

lk = bʌlk = bulk

Triple Codas

The combination of three consonants consists of a liquid or a nasal (sonorant) followed by two voiceless obstruents, except the first one which consists of three obstruents.

The following combinations are found in non-suffixed forms:

	C1	C2	C3	Examples
1	stop	fricative	stop	/dst/ midst, /kst/ text
2 (a)	nasal	stop	stop	/mpt/ exempt, / ŋkt/ sacrosanct
(b)	nasal	stop	fricative	/mps/ mumps, / ŋ/ ks/ jinx
(c)	nasal	fricative	stop	/nst/ against, / ŋ/ st/ amongst
3 (a)	l	stop	stop	/lpt/ sculpt
(b)	l	stop	fricative	/lts/ waltz
(c)	l	fricative	stop	/lst/ whilst
4 (a)	r	stop	stop	/rkt/ infarct, /rpt/ excerpt
(b)	r	stop	fricative	/rps/ corpse, /rts/ quartz
(c)	r	fricative	stop	/rst/ first
(d)	r	l	stop	/rld/ world
(e)	r	l	fricative	/rlz/ Charles

Furthermore, a multiplicity of other triple codas is created via suffixation, most of them are produced by /t, d/ of the simple past tense and by /s, z/ of the plural, the possessive, and the third person singular of the simple present. Also noteworthy are the possibilities created by /T/, the 'ordinal number morpheme' (e.g. sixth [sɪksɵ]) and the ending deriving nouns from adjectives (denominal morpheme) (e.g. warmth [wɔrmɵ]).

The following examples the possibilities of triple codas via suffixation in terms of general classes; so, actually occurring triple codas have many more combinations than the examples cited here:

	C1	C2	C3	Examples
1	nasal	obstruent	/t, d, s, z/	laments
2	/s/	stop	/t, d, s, z/	lisped
3 (a)	/l/	obstruent	/t, d, s, z/	gulped
(b)	/l/	nasal	/d, z/	filmed
4 (a)	/r/	obstruent	/t, d, s, z/	wharfs
(b)	/r/	/l/	/d, z/	curls
(c)	/r/	nasal	/d, z/	turned
5	obstruent	obstruent	obstruent (only /pts, kts, fts, pst, kst/)	lifts

Quadruple Codas

Four consonants can occur together, they start with the sound oral plosive / k / as the first member followed by /sts, sθs/ as the second member, as in,

ksθs - siksθs = sixths

ksts - teksts = texts

Starting with nasal plosive / m / as the first member followed by /pts/ as the second member.

mpts - prɒmpts = pompts

Starting with approximant / l / as the first member followed by /fθs, kts/ as second members.

lfθs - twelfθs = twelths

lkts - mʌlkts = mulcts

The above examples show that four-consonant clusters occur only in codas.

Final Word Syllables in Standard Kurdish

Introduction

According to terminology, the word syllable (bəргə) is a complex word. It consists of a simple

word (bƏr) and a suffix (gƏ). A syllable includes one or more than one syllable which comes out from the mouth with a chest pulse (Khoshnaw, 2014, p. 46)

In the Kurdish language, the word syllable (bƏrgƏ) is defined in different ways, for example, Fatih defines syllables depending on phonetics as a group of sounds in a word that is pronounced with a high tone, the listener notices that high-release. He could easily differentiate it into a word (1984, p. 183)

A syllable is described phonetically and phonologically, according to phonetics, the syllable relates to the articulation of sounds. This definition applies to all languages but still, they may be different in the sequence of the sounds. The sequences of the sounds lead us to phonology. Phonologically, syllable of any language has their specific nature. Also, there are different patterns within one language. Some languages may share the same rules of syllables, or they may be different. As Fatih (1984) clarifies, according to phonology syllable consists of a vowel and a consonant or more than one consonant. The structure of syllables is different from one language to another. For example, in English, there is a syllable with one vowel such as I /ɑɪ/, but in the Kurdish language, a syllable does not consist of only one vowel. One vowel becomes the nucleus of a syllable and the shortage, and the length of the syllable depend on the number of consonants. The upcoming sections will illustrate the structure of Kurdish syllables.

Phonotactics of the Kurdish Language

The Kurdish language like English has different basic syllable shapes. The phonotactic constraints are usually manifested in the two-syllable margins: onset and coda. While every syllable should have a nucleus, onset, and coda are subject to language particular variation. Syllable shape inventories in different languages might differ greatly; some of the components may be required. For example, onset and nucleus are required in many languages but the coda is optional. As Zec (2007) claims, there are no dependencies between syllable subparts. If a language has an onset, it does not mean it bans or requires a coda, and the opposite is true. The fact that many languages allow various numbers of segments in onset and coda increases the number of syllable types (2007, p. 164).

In the Kurdish language, the onset is required to be filled by only one consonant, i.e. no consonant cluster is allowed in the onset. The coda, on the other hand, is optional. almost all consonants can combine freely with the vowel nuclei on both sides. The basic syllable shapes in Kurdish comply with the universal preference of syllable type inventories as onsets are highly desirable whereas codas are not favoured. This supports the cross-linguistic representation that every language allows syllables with onset; no language has only onset fewer syllables. The basic of standard Kurdish (henceforth SK) syllable shapes are listed.

a. CV

b. CV(V)

c. CV(C) (Hamid, 2015, pp. 88-89)

The above shapes are the basic Kurdish syllables; they may be changed depending on different words as explained in syllable structure.

Syllable Structure in SK

As O'Connor states, a syllable structure's nature varies from one language to another. This statement is also true for the Kurdish language. As, it is common that a complete shape of a syllable consists of onset, peak, and coda. Normally, the onset starts with C and the coda ends with C, or a word may not have an onset or coda, it may only consist of a peak. For example, the word Karwan contains the three parts of a syllable. While the word ewe (you) does not contain the coda or the final part of a syllable. there is no syllable without the peak, also there is no any syllable its peak is a consonant sound. The word shsh means (be silent), it is not counted as a word. The number of vowels determines the number of syllables. For instance, the word p**I**r means (full) and consists of one syllable because it contains one vowel (Fatah, 2011, p.80). Consonants come before or after the vowel or sometimes just only the vowel makes a syllable. These can make different shapes of syllables in a language, as Xoshnaw (2014) provides nine shapes of syllables in SK:

CCVCC

It determines the largest syllable shape which includes four consonants and a vowel such as Xward (ate)

CCVC as in Cwar (four)

CCV as in bra (brother)

CVC as in nan (bread)

CVCC as in dest (hand)

VCC as in ard (flour)

VC as in em (this)

V as in a (yes)

This shape can be seen only in written Kurdish Latin script, not in written Kurdish script.

CV as in ba (wind). (2014. pp. 53-54)

Phonetic Syllable Structure

A phonetic syllable is general and relates to all languages, it concerns the physiological characterization of syllables and the articulation of the sounds. Within this general framework still, each language has its own rules to deal with the phonemes. The specification of each language to deal with the phonemes goes into the phonological structure (Amin, 2009, p. 252).

Phonological Structure

The smallest syllable consists of a vowel. This vowel creates the nucleus of a syllable. It is possible

that the nucleus to be preceded or followed by any consonants. The number and the sequences of the consonants are different in each language. For example, in Kurdish, there are four consonants within a syllable, but no more than two consonants can go before or after the vowel. As is clear in the below structure of Kurdish syllables:

(C)(C){V}(C)(C)

This structure shows that V is obligatory while the consonants are optional (Amin, 2009).

In short, the vowel is the nucleus of a syllable; a syllable cannot be without a vowel. The smallest syllable consists of only a vowel which can be preceded or followed by consonants. Thus, in Latin script, there are nine possible syllable structures in the Kurdish language:

CCVCC

CCVC

CCV

CV

CVC

V

VC

VCC

CVCC (Amin, 2009)

While in the Kurdish written transcript, there are six-syllable structures:

CCVCC

CCVC

CCV

CVCC

CVC

CV (Xoshnaw, 2014, p. 54)

Final Word Syllables

Final syllable structures in Kurdish are like English ones which have some restrictions on the final syllables of the words. The examples are based on Mahwi (2008), Gharib (2019), and other common Kurdish words. The final word syllables can be explained as the following structures:

4.1 Coda

It has the following structures;

Sonorant + Stop

[r, m, n, R, l, ɬ, ŋ] + [b, p, t, d, q, k, g]

[r] + [t, d, g] [kərt], [kurd], [mərg] (sector, Kurd, death)

[R] + [g] [qoRg] (throat)

[l] + [k] [kilk] (tail)

[ɬ] + [p, t, q, k] [təɬp], [səɬt], [bəɬq], [xəɬk] (thump, single, bubble, people)

[m] + [p, k] [kəmp] [məmk] (camp) (chest)

[n]+ [d, t, ŋ, k] [hu , nər . mənd], [sənt], [ma:ŋ] [nənk] (singer, access, moon, grand-mother)

* [ŋ]

The below final structures are not allowed to occur:

[r] + [q, b, p, k] * [rq], * [rb], * [rp], * [rk],

[R] + [b, p, t, d, q] * [Rb], * [Rp], * [Rt], * [Rd], * [Rk], * [Rq]

[l] + [b, p, t, d, g, q] * [lb], * [lp], * [lt], * [ld], * [lg], * [lq]

[ɬ] + [b, d, g] * [ɬb], * [ɬd], *[ɬg]

[m] + [b, t, d, q, g] * [mb], * [mt], * [md], * [mq], * [mg]

[n] + [b, p, q] * [nb], * [np], * [nk], * [nq]

[ŋ] + [gb, gp, gt, gd, gq, gk, gg] * [ngb], * [ngp], * [ngt], * [ngd], * [ngq], * [ngk], * [ngg]

Thus, the consonant sounds of [l, ŋ] are not allowed at the end of syllables, especially with the sonorant sounds. Also, the sonorant sounds as [R, l, m, n] do not appear commonly.

Sonorant + Fricative

[r, m, n, R, l, ɬ, ŋ] + [f, v, s, z, ʃ, ʒ, x, ɣ, ʕ, ɦ, h]]

These structures are allowed at the end of syllables:

[r] + [f, v, s, z, ʃ, ʒ, x, ɣ, ʕ, ɦ, h] [ma:rf], [ma:rs], [wərz], [ʃɔrʃ], [kɨrʒ], [bərx] (Marf, May, season, Shorsh, sullen or shrivelled, lamb)

[ɬ] + [f, s, ʃ] [quɬf], [qəɬs], [x ɨ ʃ ɬ] (lock or tubular lock, vicious, gold)

[l] + [z] [mamz] (doe)

While the below ones are not allowed

[r] + [v,] * [ma:rv] , * [r]

[R] + [f, v, s, z, ʃ, ʒ] * [Rf], * [Rv], * [Rs], * [Rz], * [R ʃ], * [Rʒ]

[l] + [f, v, s, z, ʃ, ʒ] * [lf], * [lv], * [ls], * [lz], * [lʃ], * [lʒ]

[ɬ] + [v, z, ʒ] *ɬv], * [ɬz], * [ɬʒ]

[m] + [f, v, s, z, ʃ, ʒ] * [mf], * [mv], * [ms], * [mz], * [mʃ], * [mʒ]

[n] + [f, v, s, z, ʃ, ʒ] * [nf], * [nv], * [ns], * [nz], * [nʃ], * [nʒ]

[ŋ] + [b, p, t, d, q, k, g] * [ŋb], * [ŋp], * [ŋt], * [ŋd], * [ŋq], * [ŋk], * [ŋg]

The above examples show that the sound of [r] does not occur with the sounds of [v, ʒ] but can appear with the other fricative. Also, the sonorant sounds of [R, l, ɬ, m, n, ŋ] can rarely be seen with fricative sounds.

c) Sonorant + Affricate

[r, m, n, R, l, ɬ, ŋ] + [ʧ, ʤ]

A) The following structures are allowed

[r] + [ʧ, ʤ] [pɨrʧ], [mərʤ] (hair, condition)

[m] + [ʧ, ʤ] [dəmʤ], [qəmʧ] (connect, fold)

[n] + [ʤ] [gəndʒ] (young)

The below structures do not occur

[R] + [ʧ], * [Rʤ] * [R ʧ], * [Rʤ]

[l] + [ʧ], * [Rʤ] *[lʧ], * [lʤ]

[ɬ] + ʧ], * [Rʤ] * [ɬʧ], * [ɬʤ]

[m] + [ʧ], * [Rʤ] * [mʧ]

[n] + [ʧ], * [Rʤ] * [bənʧ]

[ŋ] + ʧ], * [Rʤ] * [ŋʧ], * [ŋʤ]

D) Stop + Stop

[b] + [t, k, g, q, p, d, ʔ]

None of the above occurs.

E) Fricative + Stop

[S] + [b, p, t, d, k, g, q, ʔ]

Just only [d] Can happen with [S] like [dəst] [st] (hand)

[ʃ] + [b, p, t, d, k, g, q]

[ʃt] [gəʃt] [traveling]

[ʃk] [koʃk] [palace]

Here [ʃ] can be with[t] and[k]

[ʒ] + [b, p, t, d, k, g, q, ʔ]

No, any Kurdish words can be found

[z] + [[b, p, t, d, k, g, q, ʔ]

There is only one word that can be found which is [zozk] (Zozk), the fricative sound [z] can be followed by the stop sound of [k].

[f] + [[b, p, t, d, k, g, q, ʔ]

[gɨft] (promise)

[v] + [b, p, t, d, k, g, q, ʔ] there is no word for final [v]

[ɦ] + [b, p, t, d, k, g, q, ʔ] again no word for final [h]

[ɣ] + [b, p, t, d, k, g, q, ʔ] no word for final [ɣ]

[ʕ] + [b, p, t, d, k, g, q, ʔ] no word for final [ʕ]

F) Affricate + Stop

[ʧ] + [b, p, t, d, k, g, q, ʔ]

The sound of [ʧ] can be followed by [k] [ləʧk](scarf)

[ʤ] + [b, p, t, d, k, g, q, ʔ] no word for final [ʤ]

The fricative sounds [h ɦ, ʕ, v, s, z, ʃ, ʒ, x, ɣ, f] cannot occur at the end of the syllables within them-

selves.

H) Fricatives + Affricates

[ʧ, ʤ]+[f, v, s, z, ʃ, ʒ, x, ɣ, ʕ, ɦ, h] no any word with the final fricatives and affricates

According to the above examples, in the Kurdish language, consonants create syllables with vowels. There is no syllable without a vowel and a consonant. They should come together to make a syllable. Depending on the phonotactic rules only some final syllables are allowed like [st], [mz], [rf], etc. while so many other final syllables are not allowed. Moreover, the explanation sheds light on the allowing final syllables, not the violating final syllables.

The Analysis of Final Word Syllables in English and Kurdish

5.1 Similarities

Phonetically, in English and Kurdish, syllables are described as consisting of a nucleus that has little or no obstruction to airflow preceded and followed by great obstruction. English and Kurdish languages deal with the syllable as the phonological building block of words and as a basic unit of organization for a sequence of a language,

The syllable in both languages is perceived as a phonological unit consisting of a vowel that shapes the nucleus or the peak and the consonant(s) in English and Kurdish forms are optional initial and final margins.

In English, the syllable is either open, i.e. one which ends with a vowel, or closed which ends with a consonant, the same applies to Kurdish ones.

Codas in English and Kurdish are those elements that follow the nucleus in the same syllable the coda consists of any final consonants, and onsets are those elements that start with consonants and end with the vowels.

In English and Kurdish, there are never more than two vowels in sequence in a single word (as in neon, poet, cruel, radio), but clusters of two, three, or more consonants are common.

There are restrictions to the arrangement of consonants and vowels in English and Kurdish.

5.2 Differences

The onset is required to be filled by only one consonant, i.e. no consonant cluster is allowed in the onset. What differs is that final word syllables in English are mainly consonant clusters of up to four consonants at the end of a word referring either to plurality, adding the past morpheme, or using ordinal numbers, while in the Kurdish language, the consonant clusters should not be more than two consonants.

The sequence of syllables in English can be seven consonants three before the peak and four after the peak. On the other hand, in Kurdish can be four two before the peak and two after it.

In English, there are coda, double codas, triple codas, and quadruple codas, while in Kurdish, there are only codas and double codas.

The consonant plosives can come together at the end of syllables in English, but in Kurdish, they cannot appear together.

In Kurdish the fricative consonants cannot make sequences at the end of syllables, contrary, in English fricatives at the end is common.

The lateral sound [l] cannot make clusters with the affricates while in English can make clusters.

Conclusion

Syllables in English and Kurdish share some similarities and contrast some differences.

English and Kurdish languages each have distinctive approaches to dealing with syllables by each language's unique system. Nevertheless, both languages treat the syllable as the phonetic components that make up words, a fundamental unit of organization for a sequence of speech sounds by segmenting the sounds in a rhyme of strong and weak hits. Each syllable in both languages consists of one vowel and a consonant or sometimes only a vowel, especially in English.

The word syllable is defined phonetically and phonologically, phonetically, syllables are described as consisting of a centre that has little or no obstruction to airflow preceded and followed by great obstruction. Phonologically, a syllable is a complex unit made up of nuclear and marginal syllables.

The syllable in both languages has some similarities like perceiving a syllable as a phonological unit consisting of a vowel that shapes the nucleus or the peak and the consonant(s) in English and Kurdish forms are optional initial and final margins. Also, there are restrictions to the arrangement of consonants and vowels in English and Kurdish. In both languages, there are never more than two vowels in sequence in a single word, but clusters of more than two consonants are common.

Both languages have different points; the great difference is that the final word syllables in English mainly consonant clusters of up to four consonants at the end of a word, while in the Kurdish language, the consonant clusters should not be more than two consonants. Nevertheless, the clustering of plosives, fricatives, and lateral sounds at the end of words is different in both languages.

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