NATIVE SPEAKER INTUITION WITH REGARD TO THE MONOSYLLABIC VERSUS DISYLLABIC NATURE OF ENGLISH TRIPHTHONGS

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Abstract: The article presents the results of a survey carried out among British English native speakers who were presented with a list of words containing triphthongs and asked to provide their perception of the number of syllables in the given words. When analysing the results, words in isolation were compared and contrasted with those presented in a context and also with each other. Moreover, male and female respondents' answers were considered separately and some differences were observed in the perception by men and women with regard to the issue in question. The survey showed that spelling and morphological structure of words might influence pronunciation tendencies in words containing a triphthong in native speakers of British English.

Key words: syllable, nucleus, triphthong, English, native speaker

Introduction

When teaching phonetics and phonology to English language teacher trainees, I have always tried to combine knowledge acquired from textbooks with experience of discussions I have had with native speakers in order to provide my students with the most "real" description of how sounds in isolation and in connected speech are formed in the English language.

Recently, I have stumbled upon a matter I could not resolve by studying available resources. When teaching the English syllable, I listed pure vowels, diphthongs and syllabic consonants as possible nuclei. When a student asked "what about triphthongs," I hesitated and said it was rather complicated but I knew I had to tackle the issue before another student asks the same thing the next time we deal with the same area.

The printed sources available to me did not include tripthongs in the list of sounds that can function as syllable centres and internet sources as well as the blogs I visited also gave confusing information. That is why I decided to carry out a survey, hoping the intuition of a number of native speakers would shed more light on the presented matter.

1 English syllable

When introducing a topic, I like to start with a definition which is why the English syllable has always been my least favourite topic to teach, simply because I was not able to provide one. It felt like there must be one in renowned textbooks and it was me who could not put two and two together. A number of sources, however, provide the following in place of a straightforward definition:

"The syllable is a basic unit of speech studied on both the phonetic and phonological levels of analysis. No matter how easy it can be for people and even for children to count the number of syllables in a sequence in their native language, still there are no universally agreed upon phonetic definitions of what a syllable is." [10]

That is why, lately, I simply start with a self-confident announcement that phoneticians have not yet come up with a satisfactory definition of the English syllable, which means, for students, one less definition to learn.

Cutajar[2] claims that "[a]lthough difficult to define, the syllable is a unit native speakers usually have workable intuitions about. In the majority of cases native speakers tend to agree on the number of syllables of a given word." According to Rubba[6], "[m]ost speakers of English have no trouble dividing a word up into its component syllables. Sometimes how a particular word is divided might vary from one individual to another […]".

Although a straightforward definition of the syllable might not exist, what *is* clearly defined is its phonological structure, i.e. its compulsory component – the *nucleus*, sometimes referred to as the *peak* or the *centre*, and optional parts *onset* and *coda*.

"In phonetics and phonology, the nucleus […] is the central part of the syllable, mostly [sic] commonly a vowel". [11] It is that part of the syllable which is most prominent, i.e. it is louder and longer.

The nucleus is usually represented by a *pure vowel* **(***short or long***)** or *diphthong*. To provide an example, monosyllabic words consisting of just a nuclei are (in non-rhotic accents) *or* [ɔː], are [ɑː], *I* [aɪ], *ear* [ɪə], *oh* [əʊ], etc. If there is no vowel, liquids and nasals can occur in place of a vocalic sound. According to Roach[5], "[i]solated sounds such as *m*, which we sometimes produce to indicate agreement, or *ʃ*, to ask for silence, must also be regarded as syllables". A syllable that only consists of a nucleus is characterised as having a zero onset and a zero coda. The onset and coda are those parts of a syllable preceding and following the nucleus respectively and consisting of a single consonant or their cluster.

If the onset is present, it can either be formed by a single consonant or their cluster, the maximum number being three. Again, to provide some monosyllabic words as an example, words such as *to* [tuː], *bee* [biː] or *lie* [laɪ] consist of an onset (represented by a single consonant), a nucleus and have a zero coda.

Words such as *free* [friː], *store* [stɔː], or *ply* [plaɪ] have, apart from the compulsory central component, an onset formed by a cluster of two consonants and a zero coda, while the words *spray* [spreɪ], *straw* [strɔː], or *screw* [skruː] have the same characteristics but their onset consonant cluster has three consonants.

All of the above syllables are called *open syllables*.

There are also numerous cases where there is a zero onset while the nucleus is followed by a coda, formed by one (*off* [ɒf], *Ian* [ɪən]), two (*east* [iːst], *ask* [ɑːsk]), three (*asked* [ɑːskt], *axed* [ækst]) or, occasionally, four consonants.

Monosyllabic words, such as *but* [bʌt], *crisp* [krɪsp], or *sixths* [sɪksθs] consist of an onset, nucleus and a coda and the syllables they comprise are (just like the ones above) called *closed syllables*.

As was already mentioned above and is in accordance with claims in major textbooks on phonetics and phonology, the nucleus is usually formed by a pure vowel or diphthong. The possibility of it being represented by a *triphthong* is discussed below.

2 English triphthongs functioning as nuclei

According to Roach[5], a triphthong is "a glide from one vowel to another and then to a third, all produced rapidly and without interruption". There is, unfortunately, no mention of whether this means that a triphthong, in careful pronunciation, actually 'fits into' one syllable or whether this means a combination of two. Some sources [9], however, claim that triphthongs can serve as the nuclei.

Merriam-Webster's Online Dictionary[4], for instance, defines a triphthong as "a phonological unit consisting of three successive vocalic sounds in *one* syllable" (my italics). Similar definitions, such as "a combination of three vowel sounds in a single syllable, forming a simple or compound sound" can also be found in other resources.[3]

Roach[5] explains that English triphthongs are formed from closing diphthongs by adding a *schwa*. According to Bilá[1], "[a]ll [closing diphthongs] may be followed by [ə] within the word, either as an inseparable part of the word (e.g. fire, iron, our, tower) or as a suffix appended to the root (e.g. player, greyer) or, sometimes, as a separable element internal in a compound form (e.g. nowadays)."

Slovak, which is my native language, only has pure vowels and diphthongs. These also function as syllable centres (alongside syllabic consonants). In spite of some of the above definitions, my intuition was that two glides in a triphthong were 'too much to fit' in a single syllable and that **ə** as the component by which triphthongs are formed from closing diphthongs would actually function as the nucleus of the following syllable and, thus, words like *vowel* or *liar* would consist of two syllables – [*vaʊ.əl*], [*laɪ.ə*].

My confidence, however, started to fade when a senior colleague corrected a student's pronunciation of the word 'vowel', trying to smooth the glides, claiming it to be a monosyllabic word. That was when I started to check every single word containing a triphthong I could possibly think of or I subsequently came across. Since I found several possible versions, I found myself wondering what makes native speakers of the English language decide on different pronunciations in spite of the fact that all English triphthongs are, in their phonological structure, identical (consisting of a closing diphthong and *ə*).

Wells's Pronunciation dictionary[8] offers a couple of alternatives, among them a possible *compression*, which, in print, is represented by inserting ˘, a symbol which signifies that the word in question consists of two syllables but, in certain types of pronunciation or contexts, it can become monosyllabic. The same source claims that "sometimes a sequence of sounds in English has two possible pronunciations: either as two separate syllables, or **compressed** into a single syllable" (his bold). The author, furthermore, provides the following cases when the uncompressed version is more usual:

- in rarer words,
- in slow or deliberate speech,
- the first time the word occurs in a discourse;

while he claims that compressed pronunciation tends to occur:

- in frequently-used words,
- in fast or casual speech,
- if the word has already been used in the discourse.

According to Roach[5], "[i]n present-day English, the extent of the vowel movement [in triphthongs] is very small, except in very careful pronunciation. Because of this, the middle of the three vowel qualities of the triphthong (that is, the *ɪ* or *ʊ* part) can hardly be heard and the resulting sound is difficult to distinguish from some of the diphthongs and long vowels". This is in accordance to Štekauer[7], who claims that "triphthongs very often become diphthongized, in which case the central element is elided, or even monophthongized to a long monophthong".

Inspired by literature and blog contributions, I thought of several possible factors that might influence native speakers in the pronunciation of words containing triphthongs.

1. Spelling – e.g., flower [*flaʊə*] and flour [*flaʊə*] are homophones but their appearance might cause differences in the perception of how they should be pronounced.
2. Morphological structure – words containing a suffix, e.g. buyer [*baɪə*], greyer [*greɪə*] (and, possibly, even monomorphemic words ending in –er, e.g. *power*) might tend to be perceived as polysyllabic due to the presence of an additional morphological component.
3. Phonological context – when pronounced in context (a phrase), speakers might tend to apply compression which, by effect, could cause a change in the internal structure of the triphthong in question.

The question is whether native British English speakers perceive all words containing a triphthong equally or whether the above factors are applied and, thus, the perception of these depends on the spelling, morphological structure and phonological context of the given word and if so, whether a majority of native British English speakers agree in their intuition as to the pronunciation of the above.

3 Survey

With the effort in mind to shed more light on this issue, I carried out the following survey.

3.1 Target group, survey material and analysis

A group of twenty native British English speakers (eight male and twelve female) between the ages of 18 and 65 were involved in the survey. Their responses were either obtained in person or by e-mail and they were asked to, employing their intuition, provide their perception of the number of syllables in the words in question, pronouncing them as naturally as possible.

First, twelve words in isolation, each containing a triphthong, were presented to the target group. There were two words for each triphthong (apart from *aʊə*, in the case of which four words were used due to the discrepancies I had come across and wished to clarify) for the purposes of subsequent comparison and analysis. The words were originally given in alphabetical order to avoid sequences of words containing the same triphthong so as not to influence the respondents in assigning the consequent word the same number of syllables as they did to the previous one due to the same rhyme. After the completion of the survey, the words were re-grouped according to the triphthong they contained in order to show the results more clearly. The following were the words presented to the respondents.

eɪə	greyer layer	*aɪə*	buyer tire	*ɔɪə*	lawyer loyal
əʊə	blower grower	*aʊə*	flower hour our vowel		

Consequently, the respondents were asked to do the same to the underlined words contained in short phrases. This was done with the view of possible compression due to the context the words occurred in. Moreover, I hoped to achieve a more natural perception (and less careful pronunciation). The following are the phrases as they were presented to the native speakers involved in the survey.

eɪə	the best <u>player</u> in Europe	the best-known <u>slayer</u> in London
aɪə	that one's <u>higher</u> than this one	what a <u>liar</u> he is
ɔɪə	the <u>Royal</u> family arrived	what a <u>buoyant</u> country
əʊə	the <u>lower</u> shelf is darker	the <u>mower</u> we bought
aʊə	put more <u>flour</u> in	three <u>hours</u> that took
	too <u>sour</u> for me	frequent <u>power</u> cuts

After the answers were obtained from the target group, they were divided into two groups by the respondents' gender and the corresponding percentages were calculated for each word in question.

3.2 Results

Figure 1 below shows the respondents' answers (in percentages) as to how they perceive the nature (monolosyllabic versus disyllabic) of the English triphthongs included in the given words. (The majority percentage is highlighted.)

	Word in isolation	Monosyllabic	Disyllabic	Word in context	Monosyllabic	Disyllabic
		percentage			percentage	
eɪə	**greyer**	5	**95**	**player**	0	**100**
	layer	0	**100**	**slayer**	0	**100**
aɪə	**buyer**	0	**100**	**higher**	10	**90**
	tire	45	**55**	**liar**	30	**70**
ɔɪə	**lawyer**	0	**100**	**Royal**	5	**95**
	loyal	0	**100**	**buoyant**	0	**100**
əʊə	**blower**	0	**100**	**lower**	0	**100**
	grower	0	**100**	**mower**	5	**95**
aʊə	**flower**	5	**95**	**flour**	40	**60**
	hour	45	**55**	**hours**	30	**70**
	our	**65**	35	**sour**	40	**60**
	vowel	40	**60**	**power**	0	**100**
	Total	17	**83**	**Total**	13	**87**

Figure 1. *Percentages of all respondents' answers*

When taking all respondents' answers into consideration, 11 out of 12 words in isolation were considered disyllabic, with the exception of the word *our*. This is not surprising, as this was the only word included in the survey that naturally occurs in its weak form [ɑː]. At this point, I must admit I had not thought of including this word in a context as well, which could have provided the respondents with a more natural environment and altered the results.

The words containing a suffix, such as *layer***,** *buyer***,** *blower*, *grower* etc., were labelled as disyllabic (in isolation as well as in context) by *100* per cent of respondents, which was in accordance with expectations. The word *greyer* caused, apparently, mild confusion. (As can be seen in Figure 2 below, all of these 'confused' respondents were men.) A similar situation was observed in the word *flower*. When looking at the word *flour*, however, (although this was provided in context), as many as *40* per cent of the respondents claimed they perceived the word as monosyllabic, which shows the possibility of spelling having influenced their perception. The words *tire* and *hour* were considered, by the target group, rather controversial, both coming at *45* to *55* per cent. This could be explained by their spelling and morphological structure, as they both lack a suffix and also a pseudo-suffixive ending –er. They were closely followed by the word *vowel*, which was considered disyllabic by *60* per cent of respondents. Here, however, the results might have been influenced by the fact that this word does not belong to the everyday vocabulary of an average person.

What is, however, rather interesting, as seen in the Total figures in the very last row of Figure 1, is that the context provided did not cause any significant changes to the perception of the internal structure of the examined triphthongs (compression did not seem to have been applied). Moreover, a vast majority of respondents considered *all* the given words disyllabic.

There is a word worth noticing; *hour* was purposefully 'seeded' (in isolation as well as in context) in the hope of seeing to what extent the context changes the respondents' perception. The result here, however, was, slightly disappointing. Not only was the difference small, it also had the opposite effect to that expected. When in context, a higher percentage of native speakers involved considered the word disyllabic.

It is also interesting to notice that the word *power* was also considered disyllabic by *100* per cent of respondents. Although it is a monomorphemic word, its –er ending might give the impression of a suffix.

The data obtained were further examined, taking the respondents' gender into consideration, which is shown in Figure 2.

	Word in isolation	Male		Female		Word in context	Male		Female	
		Mono	Di	Mono	Di		Mono	Di	Mono	Di
		Percentage					Percentage			
eɪə	**greyer**	13	**87**	0	**100**	**player**	0	**100**	0	**100**
	layer	0	**100**	0	**100**	**slayer**	0	**100**	0	**100**
aɪə	**buyer**	0	**100**	0	**100**	**higher**	25	**75**	0	**100**
	tire	25	**75**	**58**	42	**liar**	**50**	**50**	17	**83**
ɔɪə	**lawyer**	0	**100**	0	**100**	**Royal**	13	**87**	0	**100**
	loyal	0	**100**	0	**100**	**buoyant**	0	**100**	0	**100**
əʊə	**blower**	0	**100**	0	**100**	**lower**	0	**100**	0	**100**
	grower	0	**100**	0	**100**	**mower**	13	**87**	0	**100**
aʊə	**flower**	13	**87**	0	**100**	**flour**	**62**	38	25	**75**
	hour	**62**	38	33	**67**	**hours**	**50**	**50**	17	**83**
	our	**50**	**50**	**75**	25	**sour**	**62**	38	25	**75**
	vowel	**62**	38	25	**75**	**power**	0	**100**	0	**100**
	Total	19	**81**	16	**84**	**Total**	23	**77**	7	**93**

Mono – monosyllabic, Di – disyllabic

Figure 2. *Respective percentages of male and female respondents' answers*

Despite not having any sexist tendencies, I still believe that men and women differ in their perception of some matters, among these, possibly, language issues.

When looking at the answers provided by male and female respondents respectively, an interesting finding was observed in the case of the words *tire***,** *hour* and *vowel* when presented in isolation. The results here were contradictory regarding the respondents' gender. While a majority of *men* considered *tire* a disyllabic word and thought *hour* and *vowel* consisted of a single syllable, the *women*'s opinion was in opposition to this. The word *our* came at *50* to *50* per cent in *male* respondents, while as many as *75* per cent of *female* respondents were convinced it was a monosyllabic word. Again, I must point out that, had the word been presented in a context, the results may have been different.

Looking at the words in context, again, this did not influence the respondents' perception of the triphthongs included in the survey. What is, however, of interest here is the fact that while the word *higher* was considered disyllabic by *75* per cent of *male* respondents and even *100* per cent of *female* respondents, the percentages for *liar* came to *50:50* in *men* while as many as *83* per cent of *women* considered this word as disyllabic as well (both words contain the same triphthong and a suffix but the word *higher* has the –er suffix, which might have influenced the target group's perception). The words *flour*, *hours* and *sour*, again, had contradictory tendencies with regard to the sex of the respondents.

Conclusion

Before I conclude the results of the survey, I must stress the fact that, due to the small number of respondents involved, the results cannot be considered conclusive. They merely suggest that the issue in question is rather complicated and would require large-scale research, involving respondents, possibly categorised by age, region, education, profession (language teachers forming a special group), etc. However, what the findings of this survey might show is certain tendencies in the perception and, by effect, pronunciation of words containing triphthongs by native British English speakers. The findings suggest that the spelling and morphological structure of the word in question as well as the phonological context it occurs in might be of importance. At this point, however, I can only state that, without further thorough research, it is not impossible to provide a straightforward answer to the question of whether English triphthongs can function as syllable nuclei or not.

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