Tomasz Wiech
Kielce, Poland

Articulation and output of phoneme [r] with articulation disorders and strategy for their interpretation/remediation

Rhotics are included in all languages. Some forms of phoneme [r] are easily found in speeches, however, only 18% of them consist of two/three rhotics at most. It is worth stressing that the same place in consonant system and syllable structures is basic for them. Moreover, languages with consonant structure contain rhotics which are close to the syllable nucleus. Lindau [1: 158] adds that 'post-vocalic [r]s tend to become vowels or disappear altogether.' Moreover, vowels before [r] are lengthened.

It is necessary to note that pronunciation of [r] in RP is not similar in other languages. Gimson [2: 209] stresses that "the usual frictionless continuant variety has much in common with a vowel", nonetheless, writers who deal with the presented approach state that such differences do not necessarily lead to unintelligibilities.

Distinctive features and allophonic variations of phoneme [r]

The phoneme [r] is an approximant together with [w, j, l]. O'Connor [3: 60-61] points out that in words [r] occurs before vowels and lengthens them, but before consonants never, whereas it is never pronounced in the final position. He adds that it is often replaced by non-native speakers with the sounds that occur in their own language.

Ladefoged [4: 36] stresses that there are several allophones as a result of "applying the phonetic realisation rules to the segments in underlying forms of words." The authors who do touch the following approach mention that the allophones distinguished below are reported for both English and American English.

- post-alveolar frictionless continual – Gimson [2: 186] claims that it is common sound in RP. It is pronounced in the initial position (e.g.: *real, root*), before voiced sounds ([d] is exception), in syllable-initial clusters or boundaries (e.g.: *shrink, bridal, hungry*), in the final position when [r] is linked with a vowel of the following word (e.g.: *once and for all*)**.**
- alveolar trill – Brosnahan [5: 101] distinguishes it in Scottish dialects and the Spanish language. It is produced by the tongue which is held loosely near the alveolar ridge. The air flows between the articulators causing their movement. In typical trill one may enumerate only one movements and a single contact with the mouth's roof.
- alveolar tap – shows the same pronunciation in all languages, however in some languages acoustic energy during the closure. Ashby [6: 60] notices that it is followed by dental fricative sounds (e.g.: *thrash, thread*), [b, g] (e.g.: *bring, great*) or can be observed between vowels in the intervocalic position (e.g.: *very, sorry*).
- flap articulation – occurs in American English. In case of the British variants it may be heard occasionally in words such as *bright, grow*. Ashby and Maidment [7: 61] define it as quick flip of the tongue against the upper part of the mouth.
- retroflex – the tip of the tongue articulates with the hard palate. Clark [8: 61] mentions that although, the retroflexion is not used by English speakers, in some words (e.g.: *rye, row, ray, ire, air*) the sound appears in the initial and the final position.
- post-alveolar affricates [tr, dr] – in the pronunciation a closure is made between the tongue's tip and rims and the rear part of alveolar ridge and the upper side of teeth. Gimson [2: 209] provides that [tr, dr] is a common allophone at the initial and the intervocalic position. It never occurs at the end of a word.
- voiced and voiceless variety of [r] – the former articulation occurs when [r] is proceeded by voiceless plosive bilabials (e.g.: *price, try, cream, attract*). Voiceless one is observed in words where [r] is followed by unaccented fortis at the beginning of the word, word boundaries, or rapid speech.
- r-dropping – occurs in Southern Britain and American English dialects i.e.: Southern US, eastern part of New England, and New York City. Kawaguchi [9: 290] claims that the phoneme, 'at the end of the suffix is often not pronounced when it is followed by a suffix beginning with a consonant (...) or when it appears at the end of a word (...) is retained when it followed by a suffix beginning with a vowel.'
- r-colouring – found in American English (never in British variants) where [r] is articulated in final position of word, after the vowels. Landefoged [4: 36] distinguishes two manners of such articulation. In the first case [r] is produced as if a retroflex consonant; the tongue's tip is raised whereas in the latter case the tongue is raised, but the tip is hold down.

Significance of rhotacism in the process of interpretation

Rhotacism is a type of dyslexia which manifests itself in an incorrect pronunciation of [r]. One may distinguish here the following types of its disorder: derothotacism and nonrhotacism. According to Preyer [10: 56] the former term is defined as substitution of uttering the phoneme [r] for [l, w]. The subsequent one, Lass [11: 239-240] defines as elision of [r]. It is worthy to note that Joshi [12: 41] distinguishes atypical pronunciation of the sound. [r] pronunciation is a deviation from language norm.

Boone [13: 274-76] stresses that abovementioned articulation problems are the normal part of speech development and they disappear without logopedics treatment. However, in most cases the therapy is necessary. It is worth adding that Oyer [14: 170] claims that dialect variations should not be treated as articulation disorders, therefore they are a result of socioeconomic status, geographic isolation as well as impact of other languages, however, their usage may be a principal reason of communication disorders.

Jastrzębowska [15: 168] claims that the main cause of rhotacism is a lower efficiency of the tongue. In the normal pronunciation of [r] the tongue performs fine, subtle, trill movements. In the case when the speech organ is too thick, too weak or too strong and it has anatomical defects, such movements are infeasible. Another issue to be considered is defects in the structure of the speech organs, particularly the tongue, the hard palate and the teeth. Other causes may concern incorrect patterns of [r] pronunciation supplied by the parents.

The next problem to be taken into consideration at this stage of the paper is how to establish the methods of translatorian procedures to be practically useful for interpreters.

The speech with derothotacism chosen for analysis is only part of *Wok 'n' Woll* song. The words with [r] sound each appeared in two initial, medial and final positions. In two situations, it was easy to encode the word's meaning from the context.

The selected excerpt was presented to a representative group of Polish students whose task was to write down the lyrics and translate them. The priority taken in choosing a given technique was to provide information about interpreters' perception and methods applied to the interpreting. The total number of students who took part in test was 52, however, the present author selected only 40 of them, those ones who had high and neutral of motivation in interpreting. All the students were native speakers of Polish. Among them there were 35 women and 5 men.

The table below constitutes the summary of the statistical results according to degree of perception towards the level of motivation.

	Level of motivation	**High (Group A)**			**Neutral (Group B)**		
		Number of students					
	Perception	**+**	**-**	**o**	**+**	**-**	**o**
Word	**Rock**	20	0	0	19	1	0
	Star	20	0	0	20	0	0
	Pronunciation	15	5	0	19	0	1
	Inspiration	4	6	10	9	8	3
	Red	6	2	12	9	3	8
	Harder	8	0	12	12	0	8

'+' correct perception **'–'** wrong perception **'o'** omission

The most striking observation one can make is the high diversity in perception and, as a consequence, translation. Among Group A 60% of all words were received and rendered correctly, whereas in Group B 73%.

It is worth mentioning that the level of stress during interpretation was higher among Group A – 30% of respondents had faster pulse, 50% slower and 20% steady whereas among Group B 25% faster, 40% slower and 45% steady.

Both groups provided substitution of the words in 10%. It should be mentioned that the exchange was applied in words such as: *pronunciation* (into *presentation* 10% and *explanation* 15%), *inspiration* (into *information* 35%, *situation* 10%, *exploration* 15% and *reaction* 5%) and *red* (into *my* 10%, *white* 15%, *wet* 5%). Moreover, among the first group omission was applied in 60% and the second one only in 40%.

The meticulous research of the lyrics' interpretation reveals that 60% of interpreters had problems with interpreting. Therefore, some of them decide to omit the inaudible word or changed into another and as a consequence the main idea of the text was modified. Moreover, we should also mention the influence of several factors: the vocabulary was well-known and the students had the possibility to anticipate.

Conclusion

On the basis of the experiment we can state the following:

1) Although substitution of [r] may cause minor problems with interpreting, the level of motivation is the key factor in the following process.

2) An interpreter should omit adjectives and adverbs which are mispronounced, because they do not change the main idea of one's speech. This can be explained by the phenomenon of anticipation and the context itself, it is rather logical.

3) He should primarily focus on verbs and nouns. Their misunderstanding exerts a negative effect on the translation process.

4) The people with rhotacism should be interpreted only consecutively, not simultaneously, because it is easier to point out the most important information of one's speech.

References

1. Lindau M.: The story of /r/ [in:] Fromkin, V.A. (ed.), Phonetic Linguistics: Essays in honor of P. Ladefoged, FA: Academic Press, Orlando 1998. **2**. Gimson A.: The introduction to the pronunciation of English, Edward Arnold, London 1965. **3**. O' Connor J.D.: Better English Pronunciation, University Press, Cambridge 1992. **4**. Landefoged P.: A course in phonetics, Harcourt Brace Jocanovich, New York 1975. **5**. Brosnahan L., Malmberg B.: Introduction to phonetics, Sydnics of the Cambridge University Press, London 1975. **6**. Ashby P.: Speech sounds, Routledge, New

York 2005. **7**. Ashby M., Maidment J.: Introducing phonetic science, Cambridge University Press, Cambridge 2005. **8**.Clark J., Yallop C., Fletcher J.: An articulation to phonetics and phonology, Blackwell Publishing, Oxford 2007. **9**. Kawaguchi Y., Minegishi M., Durand J.: Corpus analysis and variation in linguistics, John Benjamins Publishing Co., Tokyo 2009. **10**. Preyer W.: The mind of the child: the development of the intellect, Adamant Media Corporation, New York 2005. **11**. Lass N.: Speech and hearing science: selected reading, tom 10, MSS Information Corporation, New York 1974. **12** Joshi R.: Language disability of Children, Sarup & Sons, New Delhi 2004. **13**. Boone D., Plante E.: Human communication and its disorders, Prentice Hall, Englewood Cliffs 1993, p. 274-76. **14**. Oyer H., Hall B., Haas W.: Speech, Language, and Hearing Disorders: a guide for the teacher, Allyn and Bacon, Boston 1994. **15**. Gałkowski T., Jastrzębowska G.: Logopedia – pytania i odpowiedzi. Podręcznik akademicki, tom II, Uniwersytet Opolski, Opole 2003.