

The Difficulty of North American – r: an Analysis as a Pronunciation Difficulty

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Abstract: The American-r phoneme, whose IPA sign is [ɹ̥], which is a retroflex case of pronunciation, represents a very serious stumbling block in teaching standard American pronunciation to Turks. Due to use of different primary articulators (tongue tip vs. tongue dorsum, the American English phoneme /ɹ/ has long been associated with relatively large amounts of articulatory variabilities as **tap**, **flap**, **approximant**, and the like. The endpoints of the articulatory continuum for /ɹ/ can be analyzed via functionally different articulatory configurations with the accompaniment of different primary articulators (tongue tip vs. tongue dorsum). These endpoints as a different type of /ɹ/ have been characterized in the literature as “bunched” which means the use of tongue dorsum and “retroflexed” that signifies the use of the tongue blade/tip, which gets to be a pronunciation difficulty for Turkish teachers of English.

The primary purpose of the current study is to investigate the problematic pronunciation issue of American English /r/ phoneme for Turks. The goal of the present study is two-folded. The first goal is to solve the serious confusion in the definition of **taps** and **flaps**, and the second is to explore the phonetic context of word-initial-medial-final flapping of /ɹ/ into retroflexion in North American English (NAE) and tapping in British English (BrE) via its ambiguous perception by Turks due to such observable entities, namely, preceding or following sound, intervocalic positioning through phonotactics and cross-language phonetic interference.

Key words: flapping, retroflexion, bunched articulation, tapping, neutralization

Introduction

There is a confusion in the explanation and definition of terms concerning a flap and a tap, and there apparently seems to be very little agreement among the phonologists on the definition of these two terms. Although the **IPA** takes flaps and taps to be the same thing, some phonologists insist on distinguishing them (Carr, 2008: 55; Trask, 1996). Giving phonetic explanations based on the place, point and manner of articulation of them inevitably lead to **neutralization** of flap and tap that happen to be misleading for the non-native learners of English. Such a dubious definition is given by Malmkjörker (1995:34-35): A **flap** or **tap** is a sound in whose articulation one speech organ strikes against the other just once...a retroflex: the curled-up tip of the tongue and the hard palate. A structural description among the flap, tap, and retroflex occurrences can be necessary here. To clarify the confusions on these two terms, some definitions given by the philologists must be compared and contrasted.

Statement of the Problem: North American-r as a Wrong Pronunciation case

The articulation and production of North American English-r is ambiguous. Many of Turkish English teachers are wrong in its pronunciation. This claim is specified by an analysis of the Turkish English teachers. Data is gathered from an examination of the oral English exam conducted at the Department of English Language Education in July 2010 on 27 Turkish English teachers, 9 of whom were males, 18 females, within age range of 25 to 34. They had a teaching experience of one year to 13 years. Each one has got an MA degree in Teaching English Education from 20 different state universities in Turkey. The subjects were all on-the-job teachers. The subjects were observed by the researcher while they were being asked questions on applied linguistic, ELT and EFL by five jury members.

The speeches of the 27 MA applicants were listened in by the researcher when they were taking the Oral exam while answering the questions asked by five jurors. The subjects had no idea that they were being graded on the efficiency of pronunciation articulation of flaps, retroflex-r, and taps. Through critical listening techniques, their repeated pronunciation errors on the form of /r/ are captured by using the **error hunt approach**, shown in the following three diagnostic charts given below. The diagnostic test utilized here depends on the suggestion made by Baker (1993:

134) and is further modified by the author of this article. For each student via this diagnostic test, an inventory of the primary articulations in word-initial, word-medial, and word-final occurrences is kept for each and every student.

Figure 1: Diagnostic Chart 1

√	=	no difficulty with this sound
XX	=	extreme difficulty with this sound
X	=	difficulty
X√	=	minor difficulty

The diagnostic test given below is kept, via a tracking activity by the present researcher, on each applicant's articulation over the problem-causing consonants at word-initial, word-medial, and word-final occurrences, and the result was:

Figure 2: Diagnostic Chart 2

Problem Sounds			Initial	Medial	Final
	=	ɹ	XX	XX	XX
	=	ɹ̥	XX	XX	XX

As a calculation, as it is seen in diagnostic chart 3, it was understood that only two of the applicants were using the bunched form of /r/ phoneme because they had earned their AM degree in USA while the rest of the applicants were using a Turkish variant of NAE-r in all environments.

Figure 3: Diagnostic Chart 3- Calculation

XX	=	English	Errors of Turks
XX	=	ɹ	25
XX	=	ɹ̥	25

There are several reasons of this ambiguous articulation of NAE-r by Turkish English teachers. In fact, the secondary goal of this paper is to show the serious confusion in the definition of taps and flaps, and the second is to explore the phonetic context of word-initial-medial-final flapping of /r/ into retroflexion in NAE and tapping in BrE and its ambiguous perception by Turks, due to such observable entities, namely, preceding or following sounds, intervocalic cases and cross-language phonetic interference.

The Phonetic Structure of /r/ in North American English

The IPA-system recognizes at least eight kinds of /r/, which are articulatorily different from each other. The articulation of /r/-phoneme in form of retroflexion, in a back-bounded form of pronunciation, is impressive in North American English (NAE), pointing to its difference from British variant which is called a tap. The American flap is treated ambiguously by Turkish teachers and teacher trainees, who seriously fail to recognize and articulate it in its native form. A possible reason for this ambiguity stems from the impact of Turkish /r/- phoneme plays a serious on this failure as a cross phonetic influence. In NAE or GA, /r/ phoneme is a voiced alveolar flap (retroflex) or a bunched semivowel; in BrE, it is a/r/ is a voiced alveolar tap semivowel. Phonetically, it has four types of

occurrences in the structure of the English language, exhibited in the following words: The symbol /r/ stands for a retroflex-r:

<u>On-glide</u>	<u>off-glide</u>	<u>both on-glide and off-glide</u>	<u>Mixed Group</u>
red /rɛd/	car /kɑr/	robber /'rɒbəɹ/	recorder /rɪ'kɔrdəɹ/
rip /rɪp/	bar /bɑr/	rubber /'rʌbəɹ/	refresher /rɪ'fɹɛʃəɹ/
rub /rʌb/	tar /tɑr/	rector /'ɛkt əɹ/	referral /rɪ'fərəl, -'fə/
read /rɪd/	star /stɑr/	radar /'ræɹdɑr/	retriever /rɪ'tri:vəɹ/
right /raɪt/	scar /skɑr/	receiver /rɪ'si:vəɹ/	proofreader /pru:fɹi:dəɹ/
roll /rɔʊl/	barber /'bɑ:ɹ əɹ/	rapper /'ræpəɹ/	procrastinator /prɔ:kɹæstəneɹtəɹ/

When it is a consonant, it is accepted as a liquid in both NAE and BrE /r/, being a semi-vowel, in a syllable-initiating position, functions as *on-glide*; in a syllable-terminating position, it functions as off-glide, without any hold (Tiffany and Carrell, 1987:102).

Different Varieties of /r/ in NAE and BrE

In the structure of English, the /r/ phoneme very frequently takes place in form of different variants, like a consonant, **semi-vowel, approximant, glide, or retroflex**. Among NAE and BrE dialects, the usage of /r/ phoneme differs characteristically. When consonant [r] is an on-glide as in **run** or **red** there occur only a few distinguishing differences among the dialect regions. There are however, many phonetic situations where the General American speaker uses [r] as an off-glide but where the typical New Englander or Southerner drops the sound or uses a non r-colored glide. The word car for instance, would be [kɑr] in GA but might be [kɑ:] in some other regions. Note that the vowel is characteristically lengthened in this case (**Tiffany and Carrell, 1987:345**). There are also some differences of the definition on /r/. For example, the American [r] is classified as a voiced linguapalatal glide. It is produced by the gliding movements of the organs of articulation. (Tiffany and Carrell, 1987: 345). The retroflex- r, when it functions as a consonant is considered to be a liquid... .. Thus, at the beginning of a word and followed by a vowel, the retroflex [r] typically functions as a consonant while at the peak of a syllable it appears to function as a vowel low (Wolfram and Johnson, 1982: 21). The alveolar continuant [r], produced with the tongue blade raised towards the alveolar ridge and the sides of the tongue in contact with the molars, forming a narrow channel down the middle of the tongue, heard in many kinds of English including RP (Davenport and Hannahs, 1998: 32). Thus, these definitions indicate that it is bound to be pronunciation problem causer to non-native speaking teachers and trainees because of its tap, flap, and retroflex allophones.

Confusion: Different Definitions on TAPS and FLAPS

There is a serious confusion in the definition of taps and flaps because there are many dubious definitions on them (Platt et al., 372 ; Ladefoged , 2006: 171-172) Some phoneticians distinguish between taps and flaps in terms of the articulatory movements involved (Crystal, 2008: 477). Phonetically dubious definitions of terms are harmful to learners since they curtail and blur the learning process. Often there is no strict distinction between taps and flaps (Bussman,1996:1178).

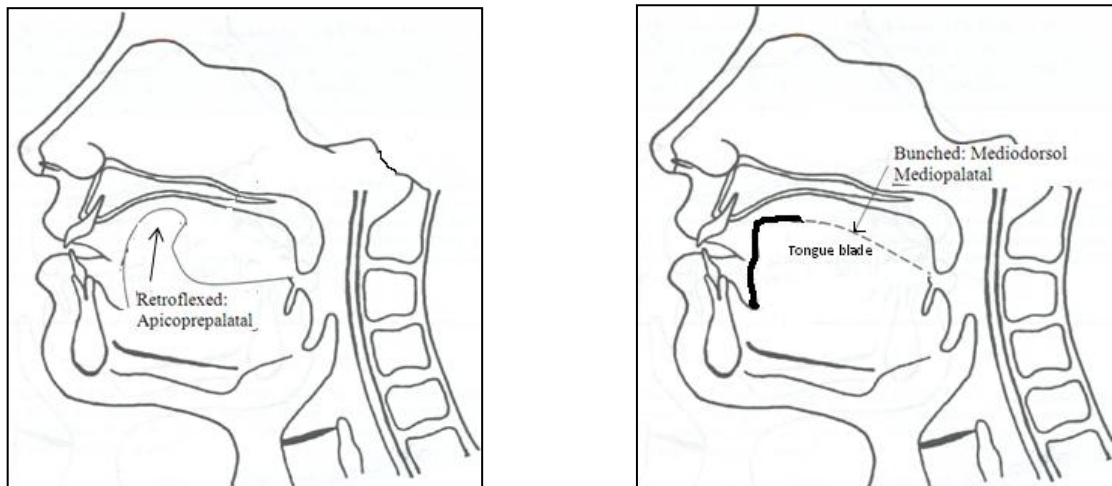
Trask (1996:146) states, the confusion of definition on them must be avoided. Similarly, some phoneticians distinguish systematically between flaps and taps, on the grounds that in the case of flaps the articulator which makes the contact is returning to a position of rest, whereas in the case of taps this is not so, and the contact

resembles a very rapid stop articulation (Crystal, 2008: 191). This is a very sensible definition that carries phonetic plausibility.

The term retroflex is a phonetic classification of consonant sound on the basis of place of articulation. It “refers to a sound made when the tip of the tongue is curled back in the direction of the front part of the hard palate – in other words, just behind the alveolar ridge. The degree of **retroflexion** varies considerably between sounds and dialects. The quality of *r* sounds traditionally associated with American English, and with many rural British English dialects (especially in the South West), illustrates one main group of retroflex sounds” (Crystal, 2008: 415).

There are two basic varieties of retroflex-*r* in NAE. The first one is the retroflex flap-*r* during the articulation of which the tip of the tongue raised up to the hard palate to touch in a back-bounded manner; that’s why it is **retroflex flap-*r***. For the tongue tip raised version, the tip of the tongue (apico) is elevated and points directly towards the rear of the alveolar ridge (postalveolar). For the retroflex articulation, the body of the tongue is hollowed and the tongue is bent backwards in a more retroflex position. Here the term apico refers to the underside of the tongue as it curls backward approximating the front portion of the palatal area (prepalatal) (Bauman-Waengler, 2009:140- A great majority of Turkish learners of English and teachers on-the-job do not articulate it in the retroflex position, but pronounce it as Turkish /r/, which is very much similar to British-*r* in word-initial positions and before or after consonants.

An other common articulation is the so-called bunched /r/. It has the following specific feature of articulation: The middle part of the tongue is raised (mediodorsal) toward the middle part of the hard palate (mediopalatal); the tongue tip is relatively low, near and behind the front lower incisors. In addition, the tongue is retracted into a compact “bunched form”, giving this articulation its characteristic name (Bauman-Waengler, 2009:140. According to IPA notation system, the bunched system does not have a representative phonetic symbol, the tongue-tip-raised version is /ɻ/, and the symbol /ɻ / is used for retroflexed central approximant (Bauman-Waengler, 2009: 141).



(Retroflex-r)

(Bunched-r)

Figure 1: Adapted from (Bauman-Waengler, 2009:140)

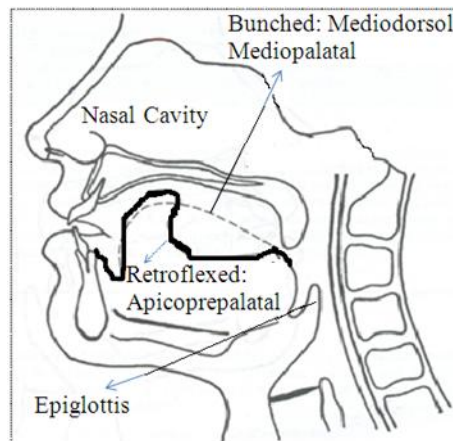


Figure 2: Adapted from (Bauman-Waengler, 2009:140)
(Combined Form)

The articulations of Turkish teachers on NAE-r do not even approximate to this bunched form of /r/. Instead, they articulate it as they do in BrE-r in the environments of word-initial and post consonantal positions, the tip of the tongue touching the alveolar/dental teeth ridge that is almost like the Turkish form in terms of point and place of articulation, which boils down to mean that Turkish – r and British – r are very similar, as seen in figure 3.

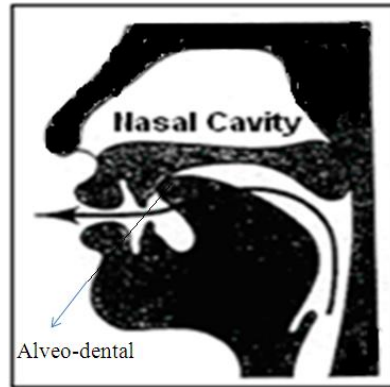


Figure 3: British English –r (Adapted from: Kelly, 2000: 51)

Conclusion

The transcription of /r/ phoneme appears to be confusing right from the beginning because the [r] sounds have been transcribed in such a variety of ways and phonetic symbols in the IPA system. There is a considerable disagreement on the phonetic nature of flapped-/r/ in NAE; two forms of utterances are accepted: retroflex and bunched shapes. One of their observations is that NAE retroflexed /r/ is actually produced by a raised, laminal tongue blade, and not a curled tongue blade, but with a curled apex. In fact, a flap is a retroflex tap.

The Turkish teachers can never approximate to this position because no comparable r-sound exists in the phonemic inventory of Turkish. In the bunched form of articulation the tip of the tongue is relatively kept low, but Turkish teachers again cannot approximate their r-articulations to the bunched form either. Turks tend to approximate their r-articulation through a phonetically oriented neutralization process in all environments. Apparently, both the phonetic characteristics and phonological structure of a speaker's native language are also influential on this issue.

In fact, /r/ is also difficult sound to be acquired infantile speech for Americans (Shriberg, 1993; Sander, 1972) and Turkish infantile speech as well. It is notoriously difficult for American children to learn to produce (McGowan et al., 2003). Sander (1972) reported that the median age for acquisition of /r/ for American children was 3 years, and it was not until age 6 years that 90% of children produced /r/ correctly.

By nature and composition as a speech sound, /r/ in itself poses an intrinsic difficulty for the non-native language teachers. Foreign speakers have a multitude of problems with the r sounds. A principal reason is that many modern languages have r's that differ conspicuously from the American. When the foreign sound is carried into English, the result may be a very prominent dialect feature. The fact that foreigner's native sound bears some general resemblance to American [r] may make learning the [r] all the more difficult (Tiffany and Carrell, 1987:346; Yamada and Tohkura, 1992)

One of the greatest difficulties seems to be teaching the foreign speaker to treat [r] as a retroflex or bunched form. Such a difficulty of pronunciation inefficiency, which damages the beauty of pronunciation and points to the heavy existence of native accent in the subjects, waits to be rehabilitated.

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