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ON TEACHING ‘GLOTTALIZATION’ TO EFL LEARNERS

This paper deals with teaching ‘glottalization’ to advanced EFL learners as an important pronunciation skill or articulatory technique typical of spoken English with special reference to its behaviour within initial three-member /s/ consonant clusters of [spr], [str], [skr] type. An overview of ‘glottalization’ as an entire phonetic process is provided in terms of teaching the articulation mechanism of English fortis stops/plosives [p], [t], [k]. Special emphasis is placed on the major differences between English and Armenian sound systems. Taking into consideration that ‘glottalization’ is totally non-existent in Armenian, advanced learners of English are duly recommended some practical advice.

Key words: ‘glottalization’, ‘glottal stop’, articulation mechanism, supraglottal cavities, fortis stop, primary closure, glottal closure, coarticulation, bi-focussed articulation, initial consonant clusters

It is a well-known fact that speech as a manifestation of language is normally a continuum of sound. In connected speech, however, speech sounds are seldom said by themselves. They tend to merge into one another thus forming phoneme sequences. Nevertheless, if solely for purposes of phonetic study speech sounds are derived by a process of abstraction from connected speech, the segment produced in isolation may be analysed and described in purely phonetic terms. In other words, now we are dealing with a discrete unit taken out of its articulatory continuum.

As commonly known, complete articulation of a speech sound when said by itself consists of **three** stages: 1) the **on-glide**, *initial*, *closing* or *excursion* stage, during which the articulating organs move to the position necessary for the pronunciation of a sound; 2) the **hold**, *compression* or *retention* stage, during which the organs of speech are kept for some time either in the same position necessary to pronounce the sound (in the case of non-complex sounds) or move from one position to another (within complex sounds, such as diphthongs, diphthongoids, and affricates); 3) the **off-glide**, *release* or *recursion* stage, when the articulating organs forming the obstruction part rapidly allowing the compressed air to escape abruptly and thus move away to a neutral position.

Such isolation of sounds from the flow of speech is, however, to a great extent simplification of real articulatory processes. Very often these stages of articulation are not clearly marked or fully preserved –hence we have *merging* or *interpenetration* of stages.

While English stops (plosives) – [p, b, t, d, k, g] as well as affricates [tʃ, dʒ] are characterized by basic oppositions of fortis/lenis, voiced/voiceless, aspirated/

unaspirated, etc., the *fortis series* – [p, t, k, tʃ] have yet another articulatory (phonetic) feature, viz. ‘**glottalization**’. By ‘glottalization’ we mean a complete closure of the glottis made by tense vocal cords brought tightly together so that no air seeps through them, thereby interrupting the passage of the air-stream into the supraglottal cavities¹. Instantly, under the pressure of the compressed air this glottal closure is released resulting in a sort of coughing noise or a kind of ‘click’, a voiceless plosive commonly referred to as ‘**glottal stop**’-[ʔ]. In other words, the mechanism of ‘glottalization’ as a specific articulatory technique can be described in the following way: English fortis stops – [p], [t], [k] are **bi-focussed**, i.e. during their articulation the speaker ‘overcomes’ **two** obstacles /see Кулешов, 1988: 15/: 1) the primary closure in the main place of articulation (oral cavity) – bilabial, alveolar, velar or palate-alveolar, respectively; 2) the glottal closure in the larynx (often called ‘glottal constriction’, ‘laryngeal coarticulation’² or simply secondary closure) with the resultant ‘glottal stop’ (also labelled ‘glottal reinforcement’ or ‘glottal replacement’³). In addition, some researchers speaking about the characteristics of English aspirated fortis stops observe that despite the increase in the air pressure against the initial obstruction leading to the ‘glottal stop’, the tension of the articulating organs at the place of the primary closure is rather weak: “When a voiceless plosive aspirated consonant is pronounced before a stressed vowel in English, the pressure of the air against the obstruction is rather strong as the glottis is open. At the same time the muscular tension at the place of obstruction is weak” /Васильев и др., 1980: 26/.

To sum up the discussion about the mechanism of fortis stop articulation with its specific pronunciation technique of ‘glottalization’ and the resultant ‘glottal stop’, we must necessarily emphasize the fact, that (as the experimental data suggest) the glottal closure is either *simultaneous* with the primary one or slightly *anticipates* it⁴. Hence, we believe, that the auditory impression of ‘length’ is conditioned by the **total** closure in the production of these sounds.

After these preliminary considerations about the nature and articulation mechanism of ‘glottalization’, we’ll now proceed to discuss the main idea in this article – teaching ‘glottalization’ as an essential pronunciation skill to foreign (in our case, Armenian) learners of English in view of comparing and revealing the major differences between the articulation bases of both languages. In this respect, first and foremost, we must take into account the fact that ‘glottalization’ (‘glottal stop’, too) is ‘made’ quite *unconsciously* by native speakers; it is a most general tendency of fortis consonant articulation and part and parcel of English pronunciation. Furthermore, very often, especially in informal or rapid colloquial style of English it is *not a distinctive but a redundant feature*, i.e. co-articulation becomes the main or prevalent articulation.⁵

Traditionally, EFL learners (intermediate and upwards) are well-advised to avoid using ‘glottalization’ altogether while doing a pronunciation course and, accordingly, teachers of phonetics are recommended to teach the so-called ‘careful’,

‘slow colloquial’ style of English pronunciation, thus wholly excluding the use of the ‘glottal stop’ during the articulation of final fortis stops.

Obviously, such an approach seems quite valid since, clearly enough, foreign learners at this level of English proficiency should be exposed to ‘correct’ and ‘precise’ pronunciation, carefully read and slowly enunciated texts and explicit (hence, *understandable*) pieces of spoken English. Otherwise stated, the type of pronunciation commonly referred to as RP (somewhat ‘old-fashioned’), General British, BBC pronunciation or Estuary English⁶, etc. is, indeed, the most practicable or *teachable* model of pronunciation for foreign learners to adopt. It seems reasonable, therefore, that articulatory skills like ‘glottalization’ and ‘glottal stop’, so typical of informal, conversational style of speech should be avoided or altogether ‘ousted’ from pronunciation teaching courses at this stage of language learning.

Nevertheless, when asked to listen carefully and critically to a tape-recorded passage spoken by a native speaker, even advanced EFL learners with a good command of language and with all their phonetic sophistication, are often at a loss unable to comprehend what he/she is talking about, mainly because quite a few ‘odd’ glottal stops or unusual sound modifications (in terms of certain assimilatory processes) found in his/her spontaneous speech hamper proper listening comprehension. Hence, since we strongly believe that advanced students aiming at further improvement of listening comprehension skills, authenticity and good performance in spoken English absolutely need to be taught ‘glottalization’, we duly suggest some practical advice to Armenian EFL learners:

Above all, we must keep in mind that unlike English fortis stops [p, t, k] and the affricate [tʃ], their Armenian counterparts [փ, ք, չ] are just voiceless plosives and affricate, neither so strong nor initially aspirated. Their basic difference, however, is that while English [p, t, k, tʃ] are bi-focussed (i.e. two closures are formed and two obstructions ‘overcome’ during their articulation), Armenian [փ, ք, չ] sounds are uni-focussed, i.e. only one contact (primary closure) is made and obstruction ‘surmounted’ at the main place of articulation – bilabial, dental, glottal, etc. Thus, in view of the fact that ‘glottalization’ is totally non-existent in Armenian pronunciation and articulation basis as a whole, Armenian learners of English (quite naturally) tend to replace English [p, t, k, tʃ] with their closest counterparts in Armenian – [փ, ք, չ] as in *football, gatepost, soap powder, bookcase, coach*, etc., or in phrases, e.g. *that table, what time, great joke, get down, that chair*, etc. As a result of this approximation, such words or phrases pronounced (or rather ‘mispronounced’) without due ‘glottalization’ sound in English (viz. with a foreign accent). It is therefore essential that at this stage of language proficiency foreign students should be exposed to a style of English as it is normally spoken, which we believe will both increase motivation and improve performance. To this end, as far as teaching ‘glottalization’ is concerned, we recommend the following articulation steps: 1) To begin with, the short stressed vowel immediately before the strong

plosive (in the so-called ‘closed syllable’ of the most common CVC syllable pattern in English) should be **checked**, i.e. cut off abruptly (acoustically perceived as a short break in phonation) by the following fortis/voiceless plosive or affricate – [p, t, k, tʃ]; 2) The **hold** stage of the final fortis stop should somewhat be ‘sustained’ and made longer, auditorily signalled by the increase in the duration of the primary closure. Almost concurrently or slightly preceding it, this ‘lengthening’ of the main contact in the mouth cavity is further ‘reinforced’ by glottal closure in the larynx resulting (for an instant) in a complete cessation of phonation prior to ‘glottalization’ and the ‘glottal stop’; e.g. *cat, cup, get, sick, pick*, etc. Phonetically it sounds like this: e.g. pick – [pɪʔ k]. Graphically, however, this can be represented as follows: ____p_____I.....ʔ k_____ where the direct lines indicate *closures* of varying length of time or duration (primary, secondary or glottal), the dotted lines indicate *voicing* and [ʔ] stands for the *glottal stop* ⁷.

So far we have been discussing ‘glottalization’ as an entire *phonetic process*, a specific articulatory technique and an inherent pronunciation skill typical of *spoken English*. Hence, ‘glottalization’ has been described, firstly, in terms of its mechanism of articulation and, secondly, its priorities, recommendations and practical advice (with special reference to teaching it to advanced EFL/Armenian learners) have been provided and specified.

This concluding section attempts to examine, somewhat briefly, ‘glottalization’ within the so-called **initial three-member consonant clusters** of [spr+V], [str+V], [skr+V] type.

As is well-known (stated in numerous studies on ‘phonotactics’), a *consonant cluster* is an accumulation or massing of several consonants viewed as a single *global* unit, i.e. the segments constituting it cannot be separated and subjected to phonological analysis. However, despite its globality and due to *phonetic environment* as well as *phonotactic possibilities*, the constituents of a ‘consonant cluster’ (viz. individual segments or speech sounds) for purposes of phonetic study and by way of abstraction *may be taken out* of the flow of speech and *analysed in isolation* (as already mentioned at the beginning of the article). Thus, for instance, the fortis/voiceless alveolar fricative [s] as the first element in [spr-] (e.g. spring, spray, etc.), [str-] (e.g. stream, strike, etc.) and [skr-] (e.g. scream, scratch, etc.) is acoustically perceived and auditorily recognised as a speech sound with a *long period of phonation*. The latter is ‘reinforced’ by the ‘glottalization’ mechanism of the fortis stop immediately following it since being the ‘nucleus’ or ‘kernel’ of the consonant cluster as a single unit with its *bi-focussed* articulation and the resultant ‘glottal stop’, it further increases the ‘length’ or duration of phonation. Finally, the frictionless continuant or approximant [r] with its characteristic **glide** ‘prolongs’, or to be more exact, resonates the articulation of the whole unit (no wonder, it’s also labelled ‘*resonant*’).

Generally speaking, at first glance such a ‘personal’(subjective) account of ‘glottalization’ within initial three-member [spr-], [str-] and [skr-] consonant

clusters might seem simplification of facts and, therefore, sound rather debatable. However, it is believed that for teaching purposes this (perceptual) approach is both practicable and effective.

In conclusion, it must be emphasized that teaching ‘glottalization’ to foreign learners of English (at least at an advanced level of language study) is absolutely necessary, for we believe that a good practical grasp of ‘glottalization’ is essential to good pronunciation and listening comprehension, which will hopefully ensure fluent command of English and improve communication skills.

NOTES

1. The terms ‘glottalization’ and ‘glottal stop’ are encountered and dealt with in: *A. C. Gimson. An Introduction to the Pronunciation of English*. 3rd edition. Edward Arnold, 1981, pp. 12, 13, 34, 152, etc.; Roach P. *English Phonetics and Phonology: a practical course*, 3rd edition. Cambridge: Cambridge University Press, 2005, pp. 29, 55-56; *Brown G. Listening to Spoken English*. М., 1984, p. 27; *Кулешов В. В.. Семиотика основ английской фонетики*. Автореф. докт. дисс., М., 1988, с. 15-16, etc.
2. Hoole P. Laryngeal Coarticulation // Hardcastle W. H. and Hewlett N. (eds.) ‘*Coarticulation: Theoretical and Empirical Perspectives*’. Cambridge: Cambridge University Press, 1995, pp. 89-99.
3. The term ‘reinforcement’ is used by O’Connor J. D. in the paper ‘*RP and the reinforcing glottal stop*’ // *English Studies*, vol. 33, 1952, p. 217.
4. See *Gimson A. C.*, Op. cit., pp. 159, 169.
5. See Мишин А.Б. О некоторых сегментных особенностях английской разговорной речи // *Фонетика устного текста*. Иваново, 1987, с. 124.
6. The pronunciation ‘norm’ or ‘standard’ traditionally called ‘Received Pronunciation’ (RP) is nowadays labelled differently by different authors, such as ‘General British’ (Lewis J. Windsor ‘*A Guide to English Pronunciation*’), ‘General RP’ (Gimson A. C. ‘*An Introduction to the Pronunciation of English*’), ‘Mainstream RP’ (Wells J. C. ‘*Accents of English*’), ‘BBC pronunciation’ (Roach P. ‘*English Phonetics and Phonology*’), ‘Estuary English’ (Wells J. C. ‘*What is Estuary English?*’; ‘*Questions and Answers about Estuary English*’) etc.
7. See *Кулешов В. В.* Op. cit., с. 18; also see *Brown G.* Op. cit., p. 28.

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Ե. ՎԱՐԴԱՆՅԱՆ – «Կոկորդայնացման» դասավանդման առանձնահատկությունները. – Հոդվածում քննվում են անգլերենի հնչարտաբերման բնորոշիչներից մեկի՝ «կոկորդայնացման» ('glottalization') դասավանդման վերաբերյալ որոշ հարցեր, որոնք դիտարկվում են բառասկզբի եռանդամ [spr-], [str-], [skr] «բաղաձայնական խմբերի» կազմում ուժեղ/խուլ [p], [t], [k] պայթականների արտաբերման առանձնահատկության տեսանկյունից: Շեշտելով անգլերենի և հայերենի հնչակազմի էական տարբերությունը հայերենում «կոկորդայնացման» իսպառ բացակայությունը, հայ ուսանողներին

տրվում են անգլերենի արտասանության հղկմանը, լսողական ընկալմանը և խոսակցական հմտությունների կատարելագործմանը նպատակաուղղված մի շարք գործնական խորհուրդներ:

Քանայի քսներ. «կոկորդայնացում», «կոկորդային պայթյուն», հնչարտաբերում, վերկոկորդային խոռոչներ, ուժեղ պայթական հնչյուն, հիմնական (գլխավոր, առաջնային) փակվածք, կոկորդային փակվածք, համարտաբերում, երկկենտրոն, բառասկզբի «բաղաձայնական խմբեր»

Ե. ВАРДАНЯН – Об особенностях обучения «глоттализации». – Глоттализация является одной из характерных свойств английской сегментной фонетики, рассматриваемой как «ядро» начальных консонантных комплексов типа [spr-], [str-], [skr-]. В статье обсуждаются некоторые вопросы, связанные с обучением армянских студентов «глоттализации» при артикуляции английских взрывных смычных согласных звуков [p], [t], [k]. Особо выделяя существенные различия между фонетическими строями английского и армянского языков, а также полное отсутствие «глоттализации» в армянском, автор предлагает учащимся ряд практических рекомендаций, нацеленных на усовершенствование навыков устной речи и слухового восприятия.

Ключевые слова: «глоттализация», «гортанный взрыв», артикулирование, надгортанные полости, сильный взрывной, основная смычка, глоттальная смычка, двухфокусная артикуляция, коартикуляция, начальные консонантные комплексы