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**What kind of /r/ is linking /r/?
An analysis of the realization of /r/ in linking /r/
in RP on the basis of Polish phonetic books**

ABSTRACT

The paper looks at the phenomenon of linking /r/ in RP and aims to find out what Polish phoneticians say the realization of linking /r/ in RP is on the basis of their books. During the inspection of the material it has transpired that it is not easy to find what the phonetic value of linking /r/ is. This is largely due to the inconsistencies among the scholars, some of whom say that it is the alveolar tap and some that it is the post-alveolar approximant that is the usual variant used for the linking context. The author concludes by recommending further research in this field.

Keywords: linking /r/; alveolar tap; post-alveolar approximant; RP; allophone

1. Introduction

The paper looks at the phenomenon of linking /r/¹ in RP² and aims to systematize our knowledge concerning the realization of linking /r/ in

¹ See Cruttenden, 2008, for the term.

² See Wells, 1992, for the term.

RP on the basis of Polish phonetic books. More specifically, the paper seeks to find out what Polish phoneticians say the realization of linking /r/ in RP is. During the inspection of the books it has transpired that the matter of the realization of linking /r/ is sometimes given no attention. The author proceeds to argue that it is worthwhile, e.g. from the viewpoint of second language pronunciation teaching and learning, to address the issue of the realization types found in linking /r/ in Polish books on phonetics. Secondly, some of the views expressed by different authors concerning the variety of /r/ used in linking /r/ as well as its incidence have not been found consistent with one another, with some authors saying that it is the alveolar tap that is the usual variant for linking /r/ and some that it is the post-alveolar approximant. These views are presented and a suggestion is made that further research in this area be undertaken to avoid contradiction. Thirdly, terminological difficulties concerning trills and taps have emerged, which have made a full appreciation of the realization of linking /r/ more difficult. This is why a thorough examination of this subject is performed. Finally, the conclusion is offered, which, due to the difficulties mentioned above, speaks in favour of further elaboration of the subject of the realization of linking /r/ either in the form of an analysis of phonetic books written by English authors or in the form of a usage-based account of the variants of linking /r/ in RP, or both.

2. Presentation and discussion 1

When one inspects the many books written by Polish scholars on the subject of English pronunciation one notices that the subject of the phonetic realization of linking /r/ is sometimes left undiscussed. Bałutowa in her delightful little book *Wymowa angielska (English Pronunciation)* (2003: 85) talks about the sound /r/ in standard English emphasizing that its articulation is so very different from its Polish counterpart that “it is best to forget that the same letter is used to represent it”. She adds that “it is much more similar to [the Polish]

/ʒ/ [ʒ] sound”³. Bałutowa (2003) mentions in passing dialectal kinds of /r/ which are sounded preconsonantly, as in *bird* /bɜ:rd/, discouraging their use by the Polish learner. She also makes a mention of linking /r/ without specifying, however, what variety of /r/ is or could be used in it. It may, however, be assumed that Bałutowa (2003) recommends the usage of the post-alveolar approximant [ɹ] for linking /r/ given her recommendation for /ʒ/ as a substitute for [ɹ] as in *very* /'veʒi/ or *great* /gʒeɪt/. No doubt, there indeed exist points of resemblance between /ʒ/ (sometimes described as a post-alveolar fricative⁴) and the post-alveolar approximant [ɹ] (being a fricative in some contexts (Jones 2002, Reszkiewicz 2005)), a fact which was noticed, with some reservations, by Pring (1971), Jassem (1971), or by Jones (2002).

Szpyra-Kozłowska and Sobkowiak (2001) in their excellent *Workbook in English Phonetics* address the issue of linking /r/ under the section of rhotics where the allophones of the phoneme /r/ in RP are specified. Yet, no specification is made regarding the variants of linking /r/. It may, however, be supposed that it is the post-alveolar frictionless continuant [ɹ] or the alveolar tap [ɾ] that might be inserted between two non-high vowels in the linking context. The reasons for this supposition are as follows. As far as the frictionless continuant is concerned it is called “[t]he major variant of the /r/ sound in English” by the authors of the *Workbook* (p. 75). As for the other sound, they say that the tap allophone can be found intervocalically (Szpyra-Kozłowska, Sobkowiak 2001, p. 75). Linking /r/ in RP is a very widespread phenomenon, thus, given that the major variant of /r/ is [ɹ], one may expect this very sound to be used as a linking form in such contexts as *mother and father* or *as far as*. On the other hand, this context, being intervocalic, is also the right setting for the

³ In Polish, in a slightly wider context: “Brzmienie angielskiego [r] jest tak różne od polskiego, że najlepiej zapomnieć w ogóle, że oznaczamy je tą samą literą. O wiele bardziej jest ono podobne do naszego [ż].”

⁴ <http://www.internationalphoneticalphabet.org/ipa-sounds/ipa-chart-with-sounds/>

potential occurrence of the tap, an observation which operates in accordance with the description put forward by Szpyra-Kozłowska and Sobkowiak (2001: 75).⁵

It is worth adding at this point that the above suppositions concerning both books are speculations only on the part of the present author. We do not know for certain what type of /r/ is linking /r/ based on the aforementioned works. Neither do we know whether there exists still another realization type that could be used as a liaison according to the authors of the books or whether – in the case of the latter book – the two variants of /r/ are in free variation or whether one is more generally used than the other.

The author of the present paper takes the view that for the sake of scientific precision and search for truth as well as from the standpoint of teaching and learning second language pronunciation it is beneficial to indicate what manifestation of /r/ is linking /r/, especially that there seem to be at least two options offered. Linking /r/ is a widespread phenomenon in RP and its use is recommended to EFL learners by a vast majority of leading experts in the field, hence it seems natural to the author that the variant of linking /r/ be mentioned in books on English pronunciation alongside the specifications concerning the mechanics of linking /r/ use, a point which specialists usually concentrate upon. The specialists talk more about *pronouncing* linking /r/ rather than about *how* to pronounce it. Nonetheless, these two approaches are by no means exclusive – they may well work together, complementing each other.

A case in point is the relatively recently published absorbing pronunciation practice book by Mańkowska *et al.* (2009: 172-175). When discussing rhotics in English the authors make use of the narrow transcription, which is to be praised, but then, moving to utterances and connected speech they switch to the broad transcription rendering linking /r/s by dint of /r/ as found in the regular spelling.

⁵ One other book that can be referred to in this section is Miatluk (2000). In this partly theoretical, partly practical book, linking /r/ is mentioned (p. 23, p. 30), but its allophone is not pointed out.

“Persevering” with the allophonic transcription would help the users of the material internalize the sound manifested in linking /r/, associate it with the audio material, or just see the interesting beauty of the difference between the variants, which would, I trust, be conducive to learning a foreign language and the sounds thereof. This also, I believe, squares well with J. D. O’Connor’s (2006: 1-12) precepts directed for the EFL learner, which concern a deep understanding of the importance of the purpose of a foreign student of English pronunciation, which is “to acquire a perfect pronunciation” (O’Connor 2006, p. 5) as well as a profound understanding of the distinctions between hearing English and listening to English, between phonemes and sounds (allophones) and between the first and the second stage in the learning of pronunciation:

the second stage in learning pronunciation must be to learn to use as many different sounds as it is necessary to represent a particular phoneme (*ibid.*, p. 10).

3. Presentation and discussion 2

Jassem in his *Podręcznik wymowy angielskiej (Handbook of English Phonetics)* (1971: 258-260) elaborates on the various allophones of the phoneme /r/ stating that it is the non-syllabic vocalic, retroflexed variant of the phoneme /r/ that is its “principal variant” due to its being “the least conditioned by the neighbourhood of other sounds” (Jassem 1971, p. 258)⁶. In spite of this, it is the alveolar tap that he selects for the allophone of /r/ in linking /r/ (Jassem 1971, pp. 260-261), as in the following examples: *He is much more efficient now* or *Do you take sugar in your tea?* (Jassem 1971: 260). It is worth noticing that Jassem (1971) does not specifically or directly state that it is the alveolar tap [ɾ] that is used in linking /r/; this information has to be deduced from the description of the sound distribution as well as the examples given.

In his short but content-filled book *Fonetyka języka angielskiego (English Phonetics)* Jassem (1980: 129-131) discusses linking /r/ but

⁶ In the original Polish (in a slightly wider context): “Ponieważ ta samogłoskowa odmiana jest najmniej uwarunkowana sąsiedztwem innych głosek, uważamy ją za główny wariant fonemu /r/.”

does not specify the variant of /r/ used in it. Yet, again, it may be deduced from the explanation and the exemplification of rhotics (Jassem 1980: 78-79) that two forms of /r/ – the alveolar tap and, using Jassem’s terminology, “the non-syllabic vocoid”⁷, the main variant of /r/ – can be heard in linking /r/. However, the flapped variant⁸ is, according to Jassem (1980: 78), “regular” when it is either preceded by the vowels which never occur word-finally in English: /e/, as in *very*; /æ/, as in *baron*; /ɒ/, as in *lorry*; /ʊ/ (no example is provided by Jassem (1980) for /ʊ/) or /ə/. It appears that it is at this place, i.e. during the discussion of /ə/, that linking /r/ comes in place. Words such as *another*, *bitter* or *further* end with /ə/ in their citation form and it is only when the following word begins with a vowel sound that the orthographic <r> present in them is pronounced, e.g. *another apple* /ə'næðər 'æpl/ or *bitter end* /ə'bitər 'end/ (Jassem’s examples, 1980: 79)⁹. After the other vowels (I take them to be a:, ɔ:, ɜ:) – Jassem (1980) continues – it is either the alveolar tap or the main variant of the phoneme /r/ that may be heard, amongst other contexts, in linking /r/. These two allophones of /r/ appear to be in free variation, an observation which finds support in a later work by the same author, *The Phonology of Modern English* (Jassem 1983: 193):

The flapped allophone is in free variation with the vocalic or unstable-contoidal variant if the preceding vocoid is /ɔ:/, /a:/, or /ɜ:/ and an unaccented vocoid follows, as in *story*, etc.¹⁰

⁷ In the original: “samogłoska niesylabiczna”.

⁸ Due to the fact that I have found many specialists use the terms *tap* and *flap* interchangeably I am therefore following this usage in this paper. This issue, however, may, under other circumstances, be approached in a different way (cf. for example Ladefoged 1975: 147-148, Ladefoged & Maddieson 1997: 230-232, Trask 1996: 145-146).

⁹ It is not entirely clear whether Jassem (1980) includes /ɪə/, /eə/ and /ʊə/ into the category of the phoneme /ə/.

¹⁰ A few pages before this quote, Jassem (1983: 190) elucidates the matter of the main allophones of /r/: “The pre-vocalic principal allophone of /r/ is either a retroflex vocoid with the articulation of the main body of the tongue within or near the central

To sum up, Jassem's views on the matter of the kind of /r/ used in linking /r/ change over time. In his 1970s work, he appears to be opting for the alveolar tap as the allophone employed in linking /r/. In his early 1980s work, he partly restates what he said in the 1970s – partly, because, first, he reserves the alveolar tap for the usage of linking /r/ between words ending in schwa and words beginning with a vowel sound and, second, he chooses two free variants – the alveolar tap and the the vocalic or unstable-contoidal variant – for the usage of linking /r/ between vowel endings /ɔ:/, /ɑ:/, or /ɜ:/ and vowel beginnings, which is also restated in his 1983 work.¹¹

Reszkiewicz in his *Correct your English pronunciation* (2005), mentions three kinds of English /r/: the post-alveolar frictionless continuant, as in *red* or *write*, “the most frequent, standard variant” in RP (Reszkiewicz 2005, p. 86); “the flapped variant”, as in *very* or *sorry*, the sound that is “nearly always used in an intervocalic position” (Reszkiewicz 2005, p. 86) and a post-alveolar fricative as in *dry* or *bright*. At this point, one may notice that two options are being offered for the realization of linking /r/, i.e. the post-alveolar frictionless continuant [ɹ] and the flapped variant of the English /r/ – the voiced alveolar tap [ɾ]. The third option – the post-alveolar fricative – has to be dismissed as untenable because it occurs only after stop consonants, not a realistic context for linking /r/. The former of the available options is a possible candidate for the /r/ in linking /r/ owing to its being a very frequent sound in RP. The candidature of the

area on the quadrilateral, or an unstable postalveolar contoid.” Jassem adds, however, that, much as these two allophones differ with respect to their classificatory grouping, “they are in fact only minimally different: the position of the tongue is very nearly the same.” If I am not mistaken, Jassem (1983) could well have used the term “post-alveolar approximant” or “post-alveolar frictionless continuant” in place of the two allophones mentioned in this footnote.

¹¹ Jassem (1995) touches upon allophones of /r/ in RP: the prevocalic approximant /r/ = [ɹ], exemplified by such words as *rock* or *read* (p. 30) and the flapped /r/ = [ɾ], exemplified by such words as *very*, *sorry*, *three* (p. 31), but he does not say which of these is the usual variant used for linking /r/. Neither does he specify it when he discusses linking /r/ (pp. 278-280).

latter one for the position of linking /r/ is supported by the fact that, as Reszkiewicz (2005: 86) says, the alveolar tap “nearly always” occurs between vowels, which is the exact position for the occurrence of linking /r/, being an intervocalic phenomenon. All in all, Reszkiewicz (2005: 88) states that it is the alveolar tap that is used as a linking /r/: “because [linking /r/] is intervocalic, it is realized as the flapped variant” as in *four and four* or *a clear idea*.

Miatluk *et al.* (2008: 70) maintain that the /r/ of linking /r/ of RP “is pronounced and realised as the flap”. The authors of this statement do not specify, by means of a quantifier, whether the linking /r/ is *always*, *usually*, or only *sometimes* realised as the flap. This, as also in the case of Reszkiewicz (2005), leaves the proposition logically vague (Hołówka 2012). It is not uncommon, however, to assume that the lack of the quantifier implies the presence of the universal quantifier in the proposition (Bennett 2005). A less universal description is made by Sobkowiak (1996: 100), who states that “it is the flapped kind of /r/ that usually appears” in linking /r/ in RP. These two views on the linking /r/, one represented by Miatluk *et al.* (2008) and the other by Sobkowiak (1996), are not mutually congruent: it is logically impossible that linking /r/ is both *always* and *usually* realised as the flap. If one of the propositions is true then the other must be false (Bennett 2005). Needless to say, it is possible that both propositions are false (Bennett 2005), in which case there could exist still another kind of /r/ applied for the realisation of linking /r/. Sobkowiak’s application of the word “usually” indicates that another realization is also possible, though Sobkowiak (1996) does not unequivocally identify that sound. One passage, however, furnishes us with a clue to the identity of the sound (1996: 93):

It should be remembered that trilling or flapping /r/ is not an obligatory process in English, even in this most favourable context [i.e. intervocalically]. An ordinary frictionless continuant will do as well.

Having said that, Sobkowiak provides a box which contains common words with intervocalic /r/, such as *area*, *arrive*, *very* or *hero*. No connected speech examples are provided, but we cannot absolutely

exclude the possibility of there being a place for such instances there. If this is so, then the regular, the usual or the most commonly heard variant of linking /r/ is the alveolar tap which could be replaced by its secondary variant, the frictionless continuant.

Two recent books on the subject of English pronunciation are *Sally Meets Harry* (Nowacka *et al.* 2011) and *Praktyczny kurs wymowy angielskiej dla Polaków* (Porzuczek *et al.* 2013). The authors of both books are clear on the matter of linking /r/. It is the post-alveolar approximant that is used for linking /r/ according to Nowacka *et al.* (2011: 151). No other allophones of /r/ are discussed or hinted at by the above authors, their focus being on whether the /r/ of linking /r/ is sounded rather than *how* it is sounded. According to Porzuczek *et al.* (2013: 146) the “typical variant” used in British English is the post-alveolar approximant, which is also the realization of linking /r/. No other allophonic variation of /r/ is spoken of, but it is apparent from the wording of the phrase “typical variant” that at least one such type exists.

Summing up and concluding this section, for Jassem (1971) linking /r/ appears to be an alveolar tap. In his later work (1980), the alveolar tap is reserved for the usage of linking /r/ between words ending in schwa and words beginning with a vowel; for the other vowel endings the alveolar tap or the post-alveolar approximant are chosen, which is also restated in his 1983 work. Reszkiewicz (2005) as well as Miatluk *et al.* (2008) are very clear on the matter: an alveolar tap is always¹² used in linking /r/. And so is Sobkowiak (1996), for whom it is an alveolar tap that is usually heard in this context. A secondary variant, the frictionless continuant, seems a possible substitute for the tap for Sobkowiak (1996). For Nowacka *et al.* (2011) and Porzuczek *et al.* (2013) it is a post-alveolar approximant that is used for linking /r/.

¹² It is true that Reszkiewicz (2005: 86) says that “[t]he flapped /r/ is nearly always used in an intervocalic position.” But, firstly, this statement is very close to using the universal quantifier *always*, and, secondly, he discusses individual words then, not aspects of connected speech discussed on page 88, where the quantifier “nearly always” is not mentioned.

It is already evident that these views are not mutually consistent in their entirety, which makes it impossible to assert confidently what kind of /r/ is linking /r/ for the Polish group taken as a whole. Is Reszkiewicz (2005) or Sobkowiak (1996) right, given that the former sees *only* the alveolar tap in linking /r/ and the latter sees it as the *usual* variant of linking /r/, implying that there is at least one other? So, is the alveolar tap usually or always used in linking /r/ in RP? Is Jassem (1980) correct or is it Reszkiewicz or Sobkowiak, given that for the former the alveolar tap occurs only in a more precise linking contexts, i.e. after /ə/, whereas the other specialists do not lay down any such condition on the occurrence of linking /r/. Is it Jassem's work (1980) or is it the more recent work by Miatluk *et al.* (2008) or even more recent works by Nowacka *et al.* (2011) and by Porzuczek *et al.* (2013) that are more accurate? One cannot say for certain. These are the difficulties that arise after a brief comparison between the content of the aforementioned books. Nevertheless, it looks like the most suitable, most often chosen 'candidate' for the linking /r/ is the alveolar tap. But is it the one, given that some recent works adopt a different stance? A major difficulty, possibly a contradiction, crops up when this view is confronted with British phonetic books. Jones (1962) lends support to the Polish authors who say that it is the alveolar tap that is the usual variant of linking /r/, but his opinion is met with opposition from another prominent phonetician Windsor Lewis (2016). Other specialists, such as Gimson (1965: 201, cf. p. 202) or Cruttenden (2008: 220-221) also include a sound different from an alveolar tap to be recognized as the usual realization of linking /r/ in RP. This is why a call for further investigation – for example of phonetic books by British authors or of usage-based accounts, or both, is warranted.

4. Presentation and discussion 3

Elsewhere in his already discussed, outstanding book, Sobkowiak (1996: 228) states that “the one most often heard in the linking context” variety of /r/ is “the trilled variety”. This statement seems to

introduce another option for the realisation of linking /r/: the trill. However, Cruttenden (2008: 221) says that a lingual trill [r]¹³ is usually heard among RP speakers “only in highly stylised speech, e.g. in declamatory verse-speaking”¹⁴.

One of the older authors, the British phonetician Harold E. Palmer (1917: 15) contends that

[i]n French and other languages there are one or more sounds called *trills*. These consist of producing a *vibration*, *roll*, or *trill* at a given point of obstruction. [...]. No trills exist in Southern English, and the average English student finds it very difficult to produce them.

One of the more modern authors, the Polish phonetician Wiktor Jassem, also expresses a strong, very limiting formulation on the existence of trills in RP (1971: 83): “[t]rilled sounds do not occur in English.”¹⁵ How then can these, seemingly contradictory, descriptions be reconciled? We find the answer in Sobkowiak’s (1996) description of rhotics in English.

Having discussed two variants of /r/ in English – the frictionless continuant /ɹ/ and the “devoiced fricativized obstruent as in *trip*” – Sobkowiak (1996: 93) introduces the third realisation of /r/ – the trill or the roll, which is characterised by the vibration of one articulator against another. In Sobkowiak’s (1996: 93) words, here “the tip [of the tongue] makes a short series of intermittent closures at the post-alveolar region, very much like in articulating the Polish /r/ sound.” But one difference between the English and Polish trills, the scholar continues, is that the “length of ‘trilling’” (Sobkowiak 1996, p. 93) is “typically shorter and less distinct” in English when compared to Polish (Sobkowiak 1996, p. 93). “Indeed,” – the scholar goes on – “it

¹³ This is a reminder that the symbols enclosed in square brackets [] represent allophonic transcriptions. Thus, the ordinary /r/ stands for r in general, whereas [r] represents the voiced alveolar trill.

¹⁴ In the 1960s Gimson said (1962: 203): “A lingual roll [r] may also be heard amongst RP speakers, but usually only in highly stylized speech, e.g. in declamatory verse-speaking.”

¹⁵ In Polish: “Wibrujące głoski nie występują w języku angielskim.”

is quite common to have a single-closure /r/ in English, which is then called a flap or a tap [...]” (Sobkowiak 1996, p. 93). This description classifies flaps/taps as a subcategory of trills. On this account, there seem to exist one-contact trills (these are called flaps or taps) and multiple-contacts trills (these would be the typical trills according to the definition of trills given by Sobkowiak 1996). There are, however, several difficulties with this approach.

When discussing the kind of phonetic symbols used to represent the sounds, Sobkowiak (1996: 93) states that the choice of the symbols “depends on whether the /r/ is a trill or a flap”. In using this wording, he makes trills and flaps belong to quite distinct categories, at the same time maintaining in the background that a flap belongs to the category of trills. The phonetician strengthens this point when discussing the distributional peculiarity of English and Polish trills (1996: 93):

The English trill (or flap) [...] occurs in only one context with any frequency, namely intervocalically (between vowels).

This is, in the light of the foregoing discussion, confusing, given the precepts of logical class inclusion (Bennett 2005).

Another issue is this: should taps/flaps be ever classified as trills or should they rather be subsumed under separate categories? The treatment of trills by, for instance, Miatluk *et al.* (2008: 69), who seem to follow Sobkowiak (1996), is ambiguous. On the one hand, they treat a flapped /r/ as a kind of trill:

In comparison to Polish /r/, trilling in English is shorter and has a single closure which results in a so-called tap or flap.

On the other hand, they treat trills and flaps as if they were synonymous categories that belong to the same level of categorisation (Miatluk *et al.* 2008, p. 69): “English trill/flap occurs only between vowels”. This, however, is not very exact, to say the least. This is true not only in the light of the aforementioned observations made by Gimson (1962), Jassem (1971) or Cruttenden (2001), but also in the light of the general classification of trills and taps/flaps as well as the

variety within the category of the trill itself (Pike 1943: 124-129, Ladefoged 1975: 147-148, Ladefoged and Maddieson 1997: 217-232).

It is true to say that even Daniel Jones (1922: 49) subsumes the alveolar tap under the category of rolled (or trilled) consonants. This, however, is done with the proviso that he calls it “semi-rolled” and puts the name in inverted commas:

A variety of /r/ known as “semi-rolled”, by which we mean rolled, but formed by one single tap of the tongue (narrow phonetic symbol [ɾ]) is used by many Southern English speakers between two vowels, as in *arrive* [...].

More importantly, Jones appears to have withdrawn from this terminology and classification in a revised, ninth edition of the book (1962: 193-200). He no longer uses the name “semi-rolled” for [ɾ], nor does he subsume [ɾ] under the heading of rolls, though he does say that “[f]lapped r is formed like rolled r but consists of only one single tap [...]” (Jones 1962, p. 195). On the same page Jones remarks that the taps of the rolled lingual r

are not made by any conscious muscular movement of the tip of the tongue; the tongue is held loosely in the appropriate position, and the airstream causes the tip to vibrate.

But if flapped r were to be “formed like rolled r” then one would expect that the conscious muscular action was not involved in its production alongside the involvement of proper airstream causing the tip of the tongue to vibrate. This, however, is not the case. And this is thanks to the Bernoulli effect (Trask 1996: 50-51), which is “crucial in the production of trills” (*ibid.*, p. 51) but unimportant in the production of taps (*ibid.*, p. 350):

A tap is sometimes regarded as the limiting case of a trill, with only a single vibration, but this is phonetically dubious, since the Bernoulli effect plays no part in producing a tap.

Ladefoged (1975: 147) observes that

[e]ven in the case of a very short trill where there is only a single contact with the roof of the mouth, the movement is different from that in a tap.

In a tap the articulatory mechanism involves a single contraction of the muscles whereas in a trill no muscular action is involved, in very much the same way as in the case of the vibration of vocal cords during the articulation of voiced sounds (Ladefoged and Maddieson 1997: 217, Trask 1996: 50-51). This seems to be one of the chief reasons why Ladefoged and Maddieson (1997) separate trills from taps/flaps by placing them under different sections when discussing rhotics. This they do in spite of the fact that they are thoroughly familiar with Lindau's paper on the sound /r/ from which they "draw quite heavily" (Ladefoged and Maddieson 1997, p. 216) and in which Lindau states that "[a] tap is [...] frequently a variant of a trill" (1985: 166, quoted after Wiese 2001: 348).

Moreover, trills and taps are also classed under separate sections by Pike (1943). He subsumes trills under the heading of "iterative articulation" (Pike 1943, p. 125). He says that "[t]rills may be considered automatic repetitions of flap articulation" (Pike 1943, p. 125). Indeed, it is quite common to use the term "flap" or "tap" in such contexts, as in this invented sentence "The articulation of a trill involves one articulator flapping/tapping against another one..." or as in this authentic sentence "[...] trills are made up of a series of taps" (Lodge 2010: 45). One could well say in such contexts, "one articulator striking or touching or hitting another articulator" (Jassem 1983: 79) or "trills are made up of a series of strikes, bangs or hits"¹⁶. But it is essential to notice that maintaining that "[t]rills may be considered automatic repetitions of flap articulation" is very different from saying that a flap is a variant of a trill (Bennett 2005: 40-52). For Pike (1943: 129) "trills have an automatic repetitive element" and in a flap "the articulator gives one rapid tap against its articulating region and then immediately releases [...]" (Pike 1943, p. 124-125), thus flaps are single movements and trills iterative ones. Other, more contemporary authors confirm these observations (see, for example,

¹⁶ All these words (i.e. *striking*, *touching*, *hitting* and *strikes*, *bangs*, *hits*) are meant here to be taken synonymously.

Jassem 1983: 78-79, Trask 1996, Cruttenden 2001: 28-29, Ogden 2009: 89, Lodge 2010: 45-46).¹⁷

5. Conclusion

It turns out that it is not easy to systematize our knowledge concerning the kind of /r/ as used in linking /r/ in RP if we only are to base our answer on the Polish phonetic book discussions of linking /r/. First of all, the realization of linking /r/ is not always, quite understandably sometimes, explicitly described in such books, therefore it is difficult to state with complete certainty what the stance of a given author on the subject under discussion is. Secondly, due to the lack of mutual consistency within the presented accounts it is hard to say what kind of /r/ is linking /r/. For some authors it is an alveolar tap, for others it is a post-alveolar approximant; a third option, which includes both these sounds, is also available. According to the majority of Polish phoneticians who write about linking /r/ in their books it is the alveolar tap that is the type of /r/ used in linking /r/ in RP. But problems in this position, both internal (within the Polish books only) and external (in comparison to British books), have been detected. Therefore, a future study which would look at the realization of linking /r/ according to foreign authors, as found in their phonetic books or as found in usage-based accounts, has a chance of resolving this issue.

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¹⁷ Other data could be added to the discussion on trills and taps if other languages were to be taken into consideration. For instance, in Spanish the word for *dog* “perro” is pronounced with a trill [pero] and the word for *but* “pero” is pronounced with a tap [pero]. Here, the difference in sounds causes a change of meaning (Ladefoged 1975: 148, see also Laver 2002: 225-226). In Polish, I have observed, a child may not be able to produce the typical Polish rhotic, the alveolar trill [r], but may have no difficulty in producing the alveolar tap [r] in its place. Such observations from other languages could be taken into account when discussing the nature of the tap and of the trill.

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