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JĘZYKOZNAWSTWO

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LENITION PROCESSES: NEUTRALISATION OF PHONOLOGICAL CONTRASTS

1. Introduction**

Lenition processes, e.g. assimilation, reduction, deletion or monophthongisation, are context-sensitive processes that apply in weak positions (unstressed vowels, syllable-final consonants, segments in intonational valleys) and in casual speech¹. These processes are usually defined as a “reduction in the degree of articulatory complexity”². Their major function is to produce more pronounceable sound sequences by assimilating the properties of individual segments to those of their neighbours, by deleting some segments as well as by replacing strong segments with their weaker variants³. Hyman explains that “[a] segment X is said to be weaker than a segment Y if Y goes through X on its way to zero”⁴. If a weak sound is defined as one being unmarked, less complex than its strong counterpart, then the outcome of lenition processes should be viewed as a move

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¹ K. Dziubalska-Kołaczyk: *Beats-and-Binding phonology*. Frankfurt am Main 2002, p. 25.

² N. Gurevich: *Lenition and contrast*. New York–London 2004, p. 13.

³ P.J. Donegan: *On the Natural Phonology of vowels*. New York 1985, p. 38.

⁴ L. Hyman: *Phonology: theory and analysis*. New York 1975, p. 165.

towards a more natural state in a given context. Since the sound inventories of many languages contain pairs of phonemes such as /p, b/, /tʃ, ɟ/, /s, z/, lenitions that turn a marked sound into its unmarked counterpart may result in phonological neutralisation.

Phonological neutralisation takes place when the listener cannot determine which phoneme is represented by an actual allophone in a given context. For instance, final devoicing renders pairs of words identical in pronunciation as in the Polish words *buk* ‘beech tree’ and *Bóg* ‘God’, which are both pronounced [bʊk]⁵, or in the Russian pair *нопок* ‘defect’ and *порог* ‘threshold’ realised as [pa'rɔk], or in the German nouns *Rat* ‘advice’ and *Rad* ‘bike’ produced normally as [rat]. For the purposes of this article, phonological neutralisation should be distinguished from phonetic neutralisation which consists in the elimination of phonetic distinctions between phonemes. For example, when speakers pronounce the word *chleb* ‘bread’ as [xlep], the contrast between [b] and [p] is obliterated, but native speakers of Polish know intuitively that the voiceless plosive is an allophone of the phoneme /b/. Since *chleb* is a monomorphemic word, in the mental lexicon of the speaker, the form containing a voiceless segment in word-final position is perceived as an allomorph, i.e. a physical realisation of a morpheme, whose phonetic form is predictable from the context in which the word occurs. For instance, in Polish, all voiced obstruents undergo obligatory devoicing in sentence-final position as well as when they are followed by a voiceless obstruent. Thus it can be stated that, in cases like this, phonological neutralisation is the consequence of phonetic neutralisation.

Gurevich, who analysed lenition processes in a sample of 153 languages and dialects, makes the controversial claim that although lenition phenomena often lead to phonetic neutralisation, they hardly ever result in phonological neutralisation. According to her data, 92% of the time neutralisation is avoided. Even though Gurevich is right in her claim that the term *phonological neutralization* is tantamount to “obliteration of lexical distinction” or obliteration of “meaning distinctions”⁶, she adopts the statistical approach to neutralisation and treats lenitions that do not obliterate a considerable number of contrasts as non-neutralis-

⁵ Throughout the paper phonemes will be placed between two slashes, whereas their actual realisations or allophones will be found between square brackets.

⁶ N. Gurevich: *op.cit.*

ing⁷. Although it is true that some lenitions do not result in homophony, it is also undeniable that every lenition process that leads to the production of a speech segment that is distinctive in a given language has the potential to do so.

The major aim of the present paper is to show that every single lenition process has the potential to neutralise phonological contrasts or, in other words, to produce homophones. Whether or not homophony results from the application of a process depends on two factors, namely the sound inventory of a given language as well as its phonotactics which allows for certain sound sequences and disallows other combinations. In order to provide convincing evidence, the author will discuss numerous instances of several lenition processes operating in English and other languages.

2. Phonological neutralisation in selected lenition processes

In fast and casual speech, speakers employ lenition processes to overcome articulatory difficulties. In so doing, they either delete some sounds or change the phonological features of certain speech segments, which often results in homophony if a given feature is distinctive in that language. The following sections focus only on those cases in which neutralisation does take place. However, one should bear in mind that phonological neutralisation is not an inevitable consequence of a lenition process.

2.1. Place assimilation

Some of the English alveolars, namely /t, d, n/, manifest a particularly strong tendency towards assimilation of place. These three sounds undergo regressive assimilation of place when followed by a bilabial or a velar sound. The resultant variant is homorganic with the following sound, as in the phrases in (1) which are quoted after Cruttenden⁸.

⁷ For a critique of Gurevich's (2004) approach to neutralisation see M. Kul, S. Jaworski: *A review of Gurevich Naomi. 2004. Lenition and contrast*. www.wersita.com/science/socialsciences/psicl.html.

⁸ A. Cruttenden: *Gimson's pronunciation of English*, (5th edition.). London 1994, p. 260.

pronounced [paŋka]¹¹. The nasal also regularly assimilates to the labiodentals [f, v] and in this case phonological neutralisation occurs as both *pan flecista* ‘the flute player’ and *pamflecista* ‘pamphleteer’ are pronounced [paŋ flet̪ɕista]. Interestingly, the nasal occasionally place assimilates to a following bilabial plosive, as in the high frequency phrase *Pan Bóg* realised by many speakers as [pam buk]. If speakers of Polish start to employ this otherwise natural process in other phrases containing this sound combination, phonological neutralisations are likely to occur, as in *ton Piotra* ‘Peter’s tone’ and *tom Piotra* ‘Peter’s volume’ both pronounced [tɔm pjɔtra].

2.2. Voice assimilation

Consonant sequences whose constituents differ in voicing are difficult to pronounce, therefore in many languages they undergo voice assimilation which, in general terms, consists in producing all the elements of a consonantal cluster with the same specification for voice. What logically follows from the definition is that there are two kinds of voice assimilation namely voicing, where a [-V] segment becomes [+V], and devoicing, where a [+V] sound becomes [-V]. It is worth emphasising that final devoicing can be thought of as a kind of voice assimilation in the sense that while producing the last sound of a word/phrase the vocal folds are motionless the same as during a pause. Cross-linguistically speaking, final devoicing is very common and in many languages including Polish, Russian, German it is obligatory, but there are differences as to which segments are devoiced. In Polish, for instance, word-final voiced obstruents undergo devoicing, and so do semivowels, rhotics and nasals if preceded by a voiceless obstruent, as illustrated by the words in (3):

- (3) *zmysł* ‘sense’ [zmɨsw̥] *wiatr* ‘wind’ [vjatɨ̥]
myśl ‘thought’ (n.) [miɕ̥] *komunizm* ‘communism’ [kɔmuɲɨsm̥]
módl się ‘pray’ (imp.) [mud̥ɫɕɛ]

¹¹ One should notice, however, that in the former *Ka* is stressed, whereas in the latter it is the first syllable. As a consequence, these two can hardly be considered homophones.

¹² Some of these devoiced segments are usually dropped, e.g. *pomysł* ‘idea’ is regularly realised as [pɔmɨs̥].

Since the voiceless counterparts of sonorants do not constitute phonemes of Polish, the cases of final devoicing in (3) do not obliterate meaning differences, but those in (4) below present instances of phonological neutralisation brought about by final devoicing.

- (4) *buk* ‘beech’, *Bóg* ‘God’ [buk] *ład* ‘land’, *łont* ‘fuse’ [lont]
róż ‘rose’ (gen. pl.), *rusz* ‘move’ [ruʃ] *kot* ‘cat’, *kod* ‘code’ [kɔt]

By the same token, regressive voicing can lead to phonological neutralisation by adding a contrastive feature to sound. As Stevens states, “a change in the value of a distinctive feature in a segment has the potential for creating a new word”¹³. In Polish, regressive voicing regularly occurs across syllable and word boundaries and one can occasionally make phrases in which the process neutralises phonological contrast as in *rusz bukiet* ‘move the bunch of flowers’ and *róż bukiet*¹⁴ ‘a bunch of roses’, which are both pronounced [ruʒ buʦjet].

English is one of the languages that allow for voiced sounds at the end of words¹⁵, but such word-final segments usually undergo devoicing when followed by a voiceless sound. Natural as the process is, one finds words which contain a cluster consisting of a voiced segment followed by a voiceless one, e.g. *observe* [əb’sɜ:v], in which the first element appears to be resistant to devoicing. On the other hand, regressive voicing is always blocked irrespective of speaking style or tempo. For instance, in *good shop* the final [d] of *good* is always realised as [t], whereas in *that boy* the final [t] of *that* is never realised as [d]. This implies that in English where regressive devoicing occurs regularly at word boundaries, one can find phrases that are pronounced identically as a result of devoicing. For instance, some native speakers of English pronounce the word *police* as [pli:s], whereas *please* [pli:z] has the voiced fricative [z] in word-final position. It is absolutely certain that in casual speech the phrases *police try* and *please try* are rendered homophonous, although it should be mentioned that in the latter case the vowel [i:] is longer. It is worth stressing that speakers hardly ever find it difficult to interpret what is being said because the general context in which an utterance

¹³ K.N. Stevens: “*Articulatory – acoustic – auditory relationships*”. In: W. Hardcastle, J. Laver (eds.): *The handbook of phonetic sciences*. Oxford 1997, p. 493.

¹⁴ Word order of this kind is not normally heard in spoken Polish, but it is frequently used in poetry.

¹⁵ It should be borne in mind though that in English word-final voiced sounds are in fact partially voiced. They are fully voiced in voiced environments, i.e. contexts in which they are placed between two voiced segments, especially between two vowels.

is produced makes up for this part of acoustic signal that is lost when final or regressive devoicing has been applied.

2.3. Spirantisation

Spirantisation is a phonological process that turns a plosive sound, usually a voiced one, into a fricative. The process is particularly characteristic of Spanish, where the voiced plosives /b, d, g/ are obligatorily spirantised to [β, ð, ɣ] in every position, except for phrase initial position, after homorganic nasals and, in the case of /d/, after the alveolar lateral [l]¹⁶.

Despite Gurevich's claim as to the non-neutralising nature of this lenition process, spirantisation is likely to obliterate meaning distinctions in virtually any language that has /b/ and /v/ in its phoneme inventory. In a recent work on fast speech phenomena in English, Polish, Russian and Spanish, Jaworski¹⁷ provides acoustic evidence proving that intervocalic [b] sounds tend to be reduced to the fricative [β] whose acoustic characteristics are so similar to those of the labiodental fricative [v] that in running speech it is virtually impossible to distinguish a spirantised bilabial plosive from a labiodental fricative. It is probable then that speakers produce many a pair of homophones that manage to escape listeners' attention mainly because the general context provides the listener with sufficient information to arrive at the correct interpretation. Some possible candidates for homophones are *laba* 'free time' and *lawa* 'lava' in Polish which are likely to be pronounced as [l'aβa]. The study by Jaworski also reveals that plosives constituting the one-segment onset of a stressed syllable are not immune to the process, nor are word initial segments. It is possible then that in casual speech the phrases *widziła barana* 'she saw a ram' and *widziła warana* 'she saw a dragon' might be produced as [vi'd̪ zawa βa'rana]. If that is the case, the phonological contrast between the two speech sounds is neutralised.

Needless to say, similar examples can be found in any language that has /b/ and /v/ in its phoneme inventory and in which the sounds are found in the same

¹⁶ J.I. Hualde: *The sounds of Spanish*. New York 2005, p. 138.

¹⁷ S. Jaworski: *Lenition process in English and other languages: A hierarchy of susceptibility to inertia*. [An unpublished PhD dissertation. Adam Mickiewicz University: Poznań]. 2008, p. 122.

position(s) within the word. Several pairs of words that might become homophones in casual speech are listed in (5) below.

<p>(5) English <i>berry, very</i> <i>banish, vanish</i></p>	<p>Polish <i>laba</i> ‘free time’, <i>lawa</i> ‘lava’ <i>nabiał</i> ‘dairy products’, <i>nawiał</i> ‘he’s escaped’</p>
<p>Russian <i>болево́й</i> ‘pain’ (attr), <i>волево́й</i> ‘will’ (attr) <i>балет</i> ‘ballet’, <i>валет</i> ‘jack’</p>	<p>Spanish <i>balido</i> ‘bleating’, <i>valido</i> ‘brave’ <i>bello</i> ‘beautiful’, <i>vello</i> ‘down’ (n.)¹⁸</p>

As far as English is concerned, spirantisation of the alveolar plosive [d] can result in homophony as the acoustic characteristics of a spirantised [d] are virtually the same as those of the fricative [ð]. Consequently, pairs of words such as *other, udder, or eider, either* are rendered homophonous¹⁹. Naturally, the same outcome is produced when the fricative is replaced with the plosive. In fact, substitutions of this kind are regularly made in Irish English²⁰.

2.4. Coalescence

Coalescence is a phonological process whereby two adjacent speech segments blend and the resultant sound usually combines some qualities of both. In English, coalescence takes place when the alveolars [t, d, s, z] are immediately followed by the glide [j], either within words or across word boundaries. In casual speech such sound combinations are usually realised as [tʃ, dʒ, ʃ, zʃ], respectively. Because the [j] sound triggers the change, the process is referred to as yod coalescence. The process also occurs in phrases in which [s] precedes [ʃ]. In such cases, the alveolar has a more retracted place of articulation, as in *this shoe* that is usually realised phonetically as [ðɪʃʃuː]. Cruttenden²¹ points out

¹⁸ It should be remembered that in Spanish spirantisation is obligatory in intervocalic positions, therefore the two pairs are, de facto, homophones whenever they follow words ending in a vowel.

¹⁹ For numerous examples of spirantisation in English, see L. Lavoie: *Consonant strength*. New York 2001.

²⁰ J.C. Wells: *Accents of English*. Cambridge 1982, p. 187.

²¹ A. Cruttenden: op.cit., p. 260.

that when coalescence is applied, it can result in phonological neutralisation as in the following two pairs of phrases *Paris show* and *parish show*, or *what's your weight* and *watch your weight*. As in all cases of this type, the meaning of the phrase can be determined by the general context.

Obviously, coalescence operates in other languages too, but it involves different sound sequences. For instance, in Polish and Russian, stops followed by a homorganic fricative normally undergo a coalescence process that is also called affrication due to the quality of the resultant sound. In the case of Polish, the most frequently quoted examples include *trzeba* 'one should' and *drzwi* 'door' pronounced [tʃɛba] and [dʒvi], respectively. Importantly, when employed, the process can, in a limited number of words, lead to a change in meaning, e.g. *trzysta* 'three hundred' [tʃista] is frequently rendered homophonous with *czysta* 'clean' [tʃista], the same as *trzy* 'three' [tʃi] and *czy* 'if' [tʃi]. Besides, the following stop-fricative sequences [ts, tɕ, dz, dʒ] tend to be realised as [tʃs, tʃɕ, dʃz, dʒʒ], respectively. As a consequence, phrases such as *od siebie* 'from yourself' [ɔt ɕɛbje] can be misheard as *o ciebie* [ɔt ɕɛbje] 'about you', as in *I'm worried about you*, whereas *pod zielony* [pɔd ʒɛlɔni] 'under the green one' is likely to sound the same as *podzielony* [pɔd ʒɛlɔni] 'divided'. Naturally, this kind of neutralisation can only take place in casual speech.

Palatalisation is another assimilatory process whose outcome can lead to misunderstandings resulting from obliteration of phonological contrasts. There are numerous examples of the process in which a [s], [z], [tʃs], [dʃz] or [n] become palatal when immediately followed by one of the palatals [ɲ, ʒ, ɕ, tʃɕ, dʒʒ] as in the examples in (6) below.

- | | | | |
|-----|-------------------|-------------------|-----------------------------------|
| (6) | <i>on nie wie</i> | 'he doesn't know' | [ɔn nɛ vje] → [ɔɲ nɛ vje] |
| | <i>rozdzielać</i> | 'separate' | [rɔzd ʒɛlat ɕ] → [rɔʒd ʒɛlat ɕ] |
| | <i>rozciągać</i> | 'stretch' | [rɔst ɕɔŋgat ɕ] → [rɔɕt ɕɔŋgat ɕ] |

It must be stressed that in Polish the phonemes /n, s, z, tʃs, dʃz/ have their palatal phonemic counterparts /ɲ, ʒ, ɕ, tʃɕ, dʒʒ/, therefore each time the process is applied, one phoneme is replaced by another, which might lead to the creation of a different word. Naturally, in the vast majority of cases, the resultant words are not lexemes of Polish, however, occasionally one comes up with an expression that can be ambiguous. For example, in casual speech the phrase *len niesamowity* 'extraordinary flax' is quite likely to be realised as [lɛɲ nɛsamɔviti] which, in turn, may be understood as *leń niesamowity* 'extraordinary sluggard'.

2.5. Vowel deletion

Deletion is different from the lenition processes discussed above in that a sound undergoing the process does not change one of its features, but disappears completely. Vowel deletion, as the name implies, consists in dropping an unaccented vowel in casual or fast speech. The process is particularly characteristic of stress-timed languages in which unaccented vowels undergo obligatory reduction. Predictably, such reduced vowels are particularly prone to elision. In syllable-timed languages, e.g. Spanish, as well as non-stress-timed ones, e.g. Polish, vowel deletion is a marginal phenomenon and as such will not be considered here.

Although in the vast majority of cases vowel deletion does not lead to the creation of a different word, the deletion of any sound occupying any position may result in a change of meaning, as the examples in (7) illustrate.

- | | | |
|-------------------------------|-----------------------------|--------------------------|
| (7) (a) word-initial position | (b) word-medial position | (c) word-final position |
| [ə'baʊt] → [baʊt] | [pə'reɪd] → ['preɪd] | ['betə] → ['bet] |
| <i>about</i> <i>bout</i> | <i>parade</i> <i>prayed</i> | <i>better</i> <i>bet</i> |
| [ə'gəʊ] → [gəʊ] | [sə'pɔ:t] → [spɔ:t] | ['sɪnə] → ['sɪn] |
| <i>ago</i> <i>go</i> | <i>support</i> <i>sport</i> | <i>sinner</i> <i>sin</i> |

From the perspective of this article, cases of word-medial vowel deletion are of particular interest because they are relatively common, whereas in the other two environments the process occurs only in very casual speech. As for word-initial position, the most frequently quoted examples include the elision of the initial schwa of *and*, which often reduced to a syllabic nasal [ŋ], and the dropping of the initial [ə] of *another* in, for example, *get another* realised as [get'nʌðə]. On the other hand, deletion of word-final unaccented vowels, which affected many words in the past, e.g. *name*, *time*, seems to be limited to words in which a final schwa is followed by a linking r in connected speech. In such phrases the schwa is regularly dropped thus shortening the expression by one syllable as in *after a while* pronounced [ˈɑftə'waɪl̩]²².

However, in every language some prosodic and phonological environments are more conducive to vowel deletion than others. Kniazev-Pozaritskaja²³ main-

²² Ibidem, p. 264.

²³ S.V. Kniazev, S.K. Pozaritskaja: *Sovriemiennyj russkij literaturnyj jazyk*. [Contemporary standard Russian]. Moscow 2005, p. 209.

tain that in Russian vowels that undergo 2nd degree reduction in high frequency words are by far the best candidates for deletion, e.g. *потому* [pəta'mu] 'because', *очень* [ʲɔtʲɪjɪn] 'very', and also ones that find themselves between two homorganic consonants, as in *филологический*, *высосал*, *нового* 'philological,' 'he sucked,' 'new', pronounced as [fɪl:a'gɪtʲɪskɪj, vɨ's:aɫ, 'nɔv:a], respectively. These instances of vowel elision cannot be regarded as cases of phonological neutralisation because the reduced forms contain geminates which do not occur in Russian. By the same token, the reduced form of the Polish word *kukulka* 'cuckoo' realised as [k:uɯka] is still perceived as different from *kółka* [kuɯka] 'circle' (nom.pl.).

As the examples discussed above show, the deletion of a segment may result in the creation of a new word when the resultant form happens to be a word of that language. Obviously, vowel deletion may have the effect (see the examples in 7b), but it should be borne in mind that illegal sound sequences are frequently the outcome of the process, as in the Russian examples above. If that is the case, communication is hardly hindered by the process because illegal clusters indicate that a lenition process has taken place and, as a consequence, phonological neutralisation is avoided.

2.6. Consonant deletion

Consonant deletion is a speaker-friendly phonological phenomenon that consists in omitting a consonant, or several consonants, in casual and fast speech. Cross-linguistic analyses show that voiceless plosives are particularly prone to be deleted when placed in the middle of a cluster, which is understandable given that they are the least sonorous, i.e. the least audible, sounds and therefore eliding them can, in many cases, go unnoticed. Although cluster reduction appears to be a universal feature of language, the application of the process differs from language to language.

Cruttenden²⁴ points out that the past tense suffix realised phonetically as [t] gets elided in certain phonological contexts and, as a consequence, the listener is deprived of the phonetic cue of past tense, which may lead to a misunderstanding as in the phrases in (8).

²⁴ A. Cruttenden: op.cit., p. 261.

- (8) *stopped speaking* [stɔpt 'spi:kɪŋ] → [stɔp 'spi:kɪŋ]
changed colour [tʃeɪndʒd 'kʌlə] → [tʃeɪndʒ 'kʌlə]

In (8) neutralisation is brought about by the dropping of the inflectional suffix. It must be admitted though that in the cases where a [t] sound is not a suffix, obliteration of phonological contrast is rather unlikely.

Similarly, aspiration and deletion of word-final [s], which is a characteristic feature of Andalusian Spanish, frequently results in homophony. Since word-final [s] marks plurality in Spanish, the deletion of the segment obliterates the difference between, for example, *las muchachas* 'the girls' and *la muchacha* 'the girl'. Potentially, the process can produce thousands of neutralizations. However, Teschner²⁵ explains that in many cases lexical distinctions are maintained due to the presence of a grammatical element that disambiguates the meaning of an utterance, as in the reduced form of *mujeres* 'women' that is frequently pronounced [mu'xerə], where the last vowel reveals the plurality of the otherwise ungrammatical form. Hualde²⁶ draws the reader's attention to the fact that some speakers use a compensatory process that allows them to preserve the contrast between reduced and full forms which involves producing a more open allophone of the mid vowels [e, o], or fronting the [a] before a 'silent [s]'. However, this strategy is regularly employed only in Eastern Andalusia, whereas in many other regions the neutralization resulting from s-deletion seems to be total.

It has already been mentioned that in Polish word-final sonorants preceded by a voiceless obstruent are obligatorily devoiced, as in the words in (9). Such devoiced sonorants are hardly audible and, as a consequence, many speakers do not make the effort to pronounce them. This phenomenon is particularly common as far as [w̥] is concerned. For instance the verb *puchł* 'he was swelling' should be pronounced [puxw̥], but it is normally realised as [pux]. This form happens to sound exactly the same as *puch* 'down' (n.). Importantly, the sound [w̥] is the physical realisation of the past tense masculine suffix, therefore deletion of the morpheme dramatically changes the structure of the word it is attached to and, as can be seen from this example, it sometimes result in the production of a word with a different meaning. Still, the former word is a verb, while the latter is a noun, thus, again, misunderstanding is virtually impossible because, under

²⁵ R. Teschner: *Camino oral. Fonética, fonología y práctica de los sonidos del español*. [Vocal tract. Phonetics, phonology and practice in the sounds of Spanish]. New York 1996, p. 205.

²⁶ J.I. Hualde: *op.cit.*, p. 130.

normal circumstances, the position such reduced words occupy in the sentence remove any ambiguity. More examples of phrases illustrating the same phenomenon are found in (9) below.

- (9) *pekt* 'broke', *pek* 'bunch' → [peŋk]
jadl 'he was eating', *jad* 'venom' → [jat]
gryzl 'he was biting', *grys* 'grit' → [gris]

Russian, as any other stress-timed language, allows for a large number of heavy consonant clusters. Avanesov²⁷ provides an exhaustive list of word-medial clusters when either a voiceless or voiced stop is usually elided to make a given sequence easier to pronounce. In the following three-element consonantal sequences [-stn-, -zdn-, -stl-, -stk-, -zdk-, -stsk-, -st̩s-, -zd̩s-, -nd̩s-, -nt̩s-, -ndsk-, -ntsk-, -ndk-, -ntk-, -rd̩s-, -rd̩ʃ-, -stj-], the medial plosive is regularly deleted in standard Russian. Examples of words containing some of the clusters are listed in (10) below. The elided consonants are placed in brackets.

- (10) *участник* [uʃ̩t̩ʃas(t)ɲik] 'participant' *поздно* [pɔz(d)nə] 'late'
счастливый [ʃʲasʲ(t)livɨj] 'happy', *поездка* [paʲjes(t)kə] 'journey',
туристский [tuʲrɨs(t)sciʲ] 'tourist (adj.)', *хвостца* [xvɔs(t)ʃsə] 'coccyx' (gen. sing.),
под уздцы [pat us(t)ʃsɨ] 'by the bridle', *ирландцы* [irʲʌn(d)t̩sɨ] 'the Irish',
сердце [sʲer(d)ʃsə] 'heart', *сердчишко* [sʲerdt̩ʃiʲkə] 'heart' (dim.),

Although the process does not obliterate meaning distinctions, it does occasionally produce pairs of homophones, e.g., *косный* 'numb', *костный* 'bony' both realized phonetically as [kosnɨj]. It is worth emphasising that since *косный* and *костный* are adjectives, some utterances with the words are bound to be ambiguous as one of them can be taken for the other thus hampering communication.

Despite the fact that there are cross-linguistic differences in how consonant deletion is applied, Jaworski²⁸ argues that the process is particularly likely when the deleted segment finds itself in the middle of a cluster and is flanked by homorganic segments, as illustrated in (11) below.

²⁷ R. Avanesov: *Russkoje literaturnoje proiznoszenije* [Literary Russian pronunciation]. Moscow 1972, p. 147–151.

²⁸ S. Jaworski: *Phonetic and phonological lenition processes*. "Poznań Studies in Contemporary Linguistics" 45 (1), 2009.

(11) English	Polish	Russian
<i>wristwatch</i> [ˈrɪs(t)wɒtʃ]	<i>wszystko</i> [fʃɪs(t)kɔ]	<i>участник</i> [uˈtʃas(t)ɲɪk]
<i>handbag</i> [ˈhænd(b)æɡ]	<i>istnieje</i> [ɪs(t)ɲeje]	<i>поздно</i> [ˈpɔz(d)nə]
<i>landlord</i> [ˈlænd(d)lɔ:d]	<i>zachłystnąć</i> [zaxwɪs(t)nɔɲt͡ɕ]	<i>костный</i> [ˈkɔs(t)ɲɪ]

3. Less common lenition processes

Yeísmo and neutralisation of liquids in the coda, both of which are characteristic of Andalusian Spanish and some other accents of that language, also lead to homophony. The former process consists in replacing the palatal lateral [ʎ] either with [j] or with one of its allophones, which renders pairs such as *calló* [kaˈʎo] ‘s/he became silent’ and *cayó* [kaˈjo] ‘s/he fell’ or *pollo* [ˈpoʎo] ‘chicken’ and *pojo* [ˈpojo] ‘stone bench’ identical in pronunciation²⁹. The latter process neutralises the contrast between /l/ and /r/ before a consonant or in word-final position. Interestingly, pairs such as *harto* ‘full’ and *alto* ‘tall’ can be realised phonetically either as [ˈalto] or [ˈarto], thus the neutralisation is variable.

Glottalisation, probably the most characteristic feature of Cockney, is yet another process that results in homophony. Glottaling, which involves replacing a voiceless plosive with a glottal stop, neutralises lexical distinctions in word-final and word-medial position, e.g. *wit*, *wick*, *whip* can be realised phonetically as [wɪʔ], whereas *lightly* and *likely* can be pronounced as [ˈlaɪʔli].

Finally, degemination can also give rise to the creation of homophones and neutralise the phonological contrast between, for instance, [k:] and [k] or any other similar pair of consonants. However, listeners hardly ever find it difficult to distinguish a geminate from a single consonant despite the fact that acoustic analyses show that speakers do not produce two separate sounds. Under normal circumstances, they either prolong the hold phase for plosive geminates or produce an unnaturally long fricative when they pronounce a geminate made up of two fricatives³⁰. Nevertheless, if the speaker shortens the duration of the hold phase or the duration of a fricative geminate, neutralisation of phonological contrast is unavoidable. Unlikely as it seems, the Polish word *poddać* [pɔdːat͡ɕ] ‘to surrender’ can be understood as *podac* [pɔdat͡ɕ] ‘to give’, *lekki* [lek:i] ‘light’ (adj.) as *leki* [leki] ‘medicine’ and *odtworzyć* [ɔtːfɔzɪt͡ɕ] ‘to replay’ as *otworzyć*

²⁹ J.I. Hualde: op.cit., p. 24.

³⁰ See Jaworski (2008) for acoustic evidence.

[ɔ̃tʃəzɪt̪ɕ] ‘to open’. Likewise, the Spanish word *perro* [pero] ‘dog’ can be misheard as *pero* [pero]³¹ ‘but’ if the speaker produces a tap instead of a trill.

4. Conclusion

Lenition processes make speech easier by reducing the articulatory complexity of sound sequences. The reduction process is always realised by means of various phonological processes that either change the features of individual segments or delete sounds. Each time a phonological process is applied, the acoustic signal is impoverished and, as a consequence, the listener may find it difficult to appropriately understand what is being said because distinctions between some phonemes have been neutralised. The analysis conducted for the purposes of the article has demonstrated that, in fact, any phonological process that either changes one phoneme into another, or removes a segment from the speech stream, has the potential to obliterate phonological differences. Examples discussed in the body of the paper show that assimilation of place, assimilation of voice, spirantisation, glottalisation, degemination, vowel deletion and consonant deletion do have the potential for neutralising meaning distinctions, which may have a negative impact on communication.

There is no doubt that the dropping of a sound that functions as a morpheme has the greatest potential for producing homophones. If a morpheme is elided, the distinction between singular and plural or present and past forms is removed, which may have serious consequences for communication because it usually affects a considerable number of lexical items (cf. 2.6). By contrast, final devoicing, despite being attested in many languages, does not have a negative effect on speech processing in the languages in which it is applied because the number of homophones it produces is relatively low. The same is true of place assimilation, vowel deletion, degemination, spirantisation or glottalisation that rarely neutralise contrasts.

However, statistical data should not be used as a means of determining whether or not a given phonological process leads to meaning neutralisation. The

³¹ In the IPA alphabet, the symbol /r/ represents the alveolar trill, whereas /ɾ/ stands for the tap. Unfortunately, the former symbol is also widely used to represent other rhotics, which can be misleading.

number of neutralisations it results in is of no significance, nor is its influence on speech processing in real life communication.

Keywords: *lenition processes, phonological contrast, phonological neutralisation*

LENITION PROCESSES: NEUTRALISATION OF PHONOLOGICAL CONTRASTS

Summary

Although lenition processes lead to neutralisation of phonological contrasts between different sounds, some authors, e.g. Gurevich (2004), claim that in the vast majority of cases phonological neutralisation is avoided. The present article analyses several selected processes functioning in English, Polish, Russian and Spanish and shows that, in fact, every lenition process has the potential for neutralising phonological contrasts.

Translated by Sylwester Jaworski

PROCESY LENICYJNE: NEUTRALIZACJA KONTRASTÓW FONOLOGICZNYCH

Streszczenie

Chociaż procesy lenicyjne prowadzą do zacierania się różnic pomiędzy fonemami, niektórzy autorzy, np. Gurevich (2004), twierdzą, że w znakomitej większości przypadków procesy te nie prowadzą do homofonii, w rezultacie której niemożliwa jest jednoznaczna interpretacja znaczenia słowa. Niniejszy artykuł analizuje funkcjonowanie kilku wybranych procesów lenicyjnych w języku angielskim, hiszpańskim, polskim oraz rosyjskim i wykazuje, że każdy proces lenicyjny, usuwając określoną cechę fonologiczną, prowadzi do neutralizacji.