

DOI: 10.1515/ausp-2015-0059

Phonetic Adaptation of Hungarian Loanwords in Romanian

The Adaptation of Stop Sounds (Occlusive Plosives)

Csaba Attila BOTH

MA-candidate, Hungarian and General Linguistics Department Faculty of Letters Babeş–Bolyai University of Cluj-Napoca bothcsabaattila@gmail.com

Abstract. In current linguistics, as well as in the fields of contact linguistics and sociolinguistics, the assessment of contact between the different languages used by speakers living in the same geographical/political area receives a pronounced role. These languages inevitably come into contact. The research on language contact between Hungarian and Romanian has a past marked by scholarly works that focus especially on the lexical-semantic level. Because contact between linguistic phenomena occurs at every level of language, it is necessary to focus on the smallest linguistic elements as well. In our work, we analyse a corpus of words borrowed from Hungarian by the Romanian language, focusing on stop sounds. In our paper, we establish the main phonetic transfer modalities, discussing the subject in an international framework.

Keywords: language contact, phonetic adaptation, stop consonants, Hungarian language, Romanian language

1. Introduction

Contemporary linguistics – while in the previous decades the main goal was the establishing of language families and the description of language systems from the point of view of descriptive grammar – is more open towards translation research, contrastive and comparative linguistics, sociolinguistics, etc.

An important research area investigates the contact elements between languages, becoming a fundamental topic in the field of sociolinguistics.

The research of linguistic contact between Romanian and Hungarian has a significant history, and such investigations have been conducted both by Romanian and Hungarian researchers (see Alexics 1888; Blédy 1942; Márton 1965; Todoran 1965; Kis 1975; Bakos 1982; Kiraly 1990; Benő 2008).

In Thomason's definition, language contact is the use of more than one language in the same place at the same time. Language contact often involves direct interactions between groups of speakers, at least some of whom speak more than one language in a particular geographical region. Sometimes speakers of two or more languages live together in a single community. In such cases, there may be mutual bilingualism or multilingualism in that particular settlement. Languages have been in contact certainly for thousands of years, and probably since the beginning of humankind (Thomason 2001: 1–8).

In our paper, we analyse the most important results of language contact: loanwords. In Bussman's definition, *borrowing* is "adoption of a linguistic expression from one language into another language, usually when no term exists for the new object, concept, or state of affairs. Among the causes of such cross-linguistic influence may be various political, cultural, social, or economic developments (importation of the new products, prestige, local flavour, internationalization of specialized languages and jargons, among others)" (Bussman 1998: 139).

As Siemund states, it has been found that in a contact situation between two communities the replication of the linguistic material in one language from the other begins with lexical units and only much later begins to affect grammatical units (Siemund 2008: 5). The borrowing of lexical elements involves above all the phonological level.

For the description and categorization of language contact situations, Sarah G. Thomason has developed a four-level borrowing scale: casual contact, slightly more intense contact, more intense contact, and intense contact (Thomason 2001: 71).

The Romanian-Hungarian language contact situation (viewed from the perspective of Romanian) could be included on the first level of this scale, which is *casual contact*. In such cases, speakers of the recipient language do not need to be fluent in the donor language; at the same time, there are few bilinguals among the recipient-language speakers. Only non-basic vocabulary elements are borrowed. The *lexical module* of the language contains only content words — most often nouns, but also verbs, adjectives, and adverbs. The *structural module* of the language is not affected in any way.

The investigation of the Hungarian influence on Romanian has become a scientific concern in the second half of the nineteenth century (Todoran 1965: 921). Rosetti claims that the first elements of Hungarian entered the Romanian language in the XIth and XIIth centuries (Rosetti 1978: 382). Victor Grecu shows that, in general, we can speak of two layers of Hungarian influence: an older layer, which contains general words which were spread in the whole of the language, and another layer represented by dialectal words, limited to the Transylvanian area (Grecu 2004: 197–200).

1.1. Our research

Our study falls into the first of three contact situations described by Hasselblatt – de Jong – North: "the traditional in-depth investigation of a certain contact situation, usually involving no more than two languages" (Hasselblatt – de Jong – North 2010: 1).

We focus on one aspect of linguistic contact, namely the investigation of phonetic-phonological transfer modalities of words borrowed from Hungarian by Romanian. We do not investigate other structural levels of the Romanian language, for example the lexical-semantic or pragmatic dimension of these words. As a result, our research deals with the contact between languages from the point of view of applied phonetics, using the methods of contrastive linguistics.

The paper includes the analysis of phonetic adaptations of stop sounds based on a corpus of 727 words borrowed from Hungarian, focusing on the modalities of phonetic adaptation of these borrowed items in the case of 826 sounds.

This research started in 2012 with the listing of every dictionary entry of the *Noul dicționar universal al limbii române* (hereinafter NDULR) (edited by John Oprea, Carmen Gabriela Pamfil, Rodica Radu, and Victoria Zăstroiu, 3rd edition, published in 2009), where authors indicated the existence of a Hungarian etymon, on individual sheets. The research was continued in 2014 with the creation of a digital database (an Excel document), on which filtering, statistical calculations, and categorization was performed.

Our research and paper uses the system of the International Phonetic Alphabet (see *The handbook of the International Phonetic Association*, 1999) and for the illustration of the sounds we use the method of generative phonology.

As, besides the outlining of adaptation methods, our aim is to identify the typical transfers characteristic of each phoneme, the methods that are more frequent than 20% are defined as phonetic transfer schemes.

1.2. The articulation correspondence between the two languages

The donor language in our research is Hungarian, so we start from the phonetic system of this language.

Tabi	Table 1. The occusive explosives/stops of the Hungurian language							
	LABI	AL	ALVEO	LAR	PALA	ΓAL	VELA	AR
	voiceless	voiced	voiceless	voiced	voiceless	voiced	voiceless	voiced
stops	[p]	[b]	[t]	[d]	[c]	[1]	[k]	[g]

Table 1. The occlusive explosives/stops of the Hungarian language

	1			1 ,	8 8			
	LABIAL		ALVEOLAR		PALATAL		VELAR	
	voiceless	voiced	voiceless	voiced	voiceless	voiced	voiceless	voiced
stops	[p]	[b]	[t]	[d]	_	_	[k]	[g]
aspirated							[kʰ]	[g ^h]
stops							[K]	15]

Table 2. The occlusive explosives/stops of the Romanian language

As we can see in tables 1 and 2, there are no articulation correspondents for the palatal stops of Hungarian.

1.3. Illustration in generative phonology

The generative phonological analysis method was introduced in Hungarian linguistics by Péter Siptár, and it was first presented in the book Uj magyar nyelvtan (New Hungarian grammar), published in 2003. Siptár's method can be applied to the study of the Romanian phonetic system as well, as it is actually a structured illustration of the sounds of a language. It can be used to explore phonetic transfer, and it has the advantage of highlighting the changes during phonological adaptation.

This method of illustration was developed for both vowels and consonants, but in our case only the illustration of consonants is relevant. It is based on two major elements: the **reference point**¹ and the **sound elements**, which always mark an articulatory feature of the sound. *Table 3* summarizes the elements used in the illustrations (Siptár 2003: 322–325).

	Table 6. Internation elements of consentative					
P	labial	N	nasal			
Y	postalveolar and palatal	L	lateral			
K	velar	R	trill			
\mathbf{K}^{H}	aspirated velar	Н	durable			
Z	voiced obstruent	S	sibilant			

Table 3. Illustration elements of consonants

2. Analysis

2.1. Voiced, bilabial obstruent

The IPA symbol of this sound is [b], and it has a corresponding letter in both languages: b. It appears in the Hungarian words – in our corpus – 129 times. In 97.67% (N=126), the phonetical transfer maintains the articulatory features

¹ In Siptár's terminology: gyökércsomópont.

(ex. Hu. *abrak* [ɔbrɔk] > Rom. *abrac* [äbräk], Hu. *bábos* [ba:boʃ] > Rom. *băbaş* [bəbäʃ], Hu. *bakó* [bɔko:] > Rom. *bacău* [bäkəu], Hu. *bádog* [ba:dog] > Rom. *badog* [bädog] etc.), and this modality of transfer does not depend on the phonological environment.

The percentage is bigger than 20%, so we consider it a phonetic adaptation scheme for the [b] sound. Besides this, two more phonetical adaptation modalities can be observed, where changes of phonetic features can be noticed.



In the first case, the sound gets an H element (durable) and it changes the manner of articulation (explosive, bilabial \rightarrow fricative, labiodental) (ex. Hu. plajbász [plɔjba:s] > Rom. plaivaz [pläjväz]).



The other adaptation modality is produced with the loss of the Z element (voiced \rightarrow voiceless) (ex. Hu. *comb* [somb] > Rom. *tîmp* [simp]).

The voiced, explosive, bilabial obstruent has, in conclusion, three phonetical adaptation modalities, noticed in our research corpus (see *Table 4*).

Tubic 1. The phonetic dadptation modulities of the [5] sound					
	Noticed phenomenon	Change of sound	Changes in articulation features		
1.	maintaining the articulation features	[b] = [b]	-	scheme (97.67%)	
2.	change of one articulation feature	$[b] \rightarrow [p]$	$\textbf{voicing:} \ \mathrm{voiced} \rightarrow \mathrm{voiceless}$	modality	
3.	change of two articulation features	$[b] \rightarrow [v]$	manner: stop → fricative place: bilabial → labiodental	modality	

Table 4. The phonetic adaptation modalities of the lbl sound

2.2. Voiceless, bilabial obstruent

The IPA symbol of this sound is [p], and it has a corresponding letter in both of the languages: p. It appears in the Hungarian words – in our corpus – 112 times.

In 98.21% of the cases (N=110), the phonetic transfer maintains the articulatory features (ex. Hu. *kalap* [kɔlɔp] > Rom. *clop* [klop]; Hu. *paripa* [pɔripɔ] > Rom. *parip* [pärip]; Hu. *pelenka* [pɛlɛŋkɔ] > Rom. *pelincă* [peliŋkə]; Hu. *picula* [pisulɔ] > Rom. *piţula* [pisula] etc.), and this modality of transfer is not depending on phonological conditions.



We have also two examples for the case when the string of elements is developed by the addition of the Z element (voiceless \rightarrow voiced) (Hu. $k\acute{e}pezni$ [ke:pɛzni] > Rom. chibzui [khibzui] and Hu. $cs\ddot{o}rp\ddot{o}r$ [forpør] > Rom. ciorobor [forpør]).

The voiceless, explosive, bilabial obstruent has, in conclusion, two phonetic adaptation modalities observed in our research corpus (see *Table 5*).

Noticed Change of Changes in articulation phenomenon sound features maintaining the scheme 1. [q] = [q]articulation features (98.21%) change of one 2. $[p] \rightarrow [b]$ **voicing**: voiceless \rightarrow voiced modality articulation feature

Table 5. The phonetic adaptation modalities of the [p] sound

2.3. Voiced, alveolar obstruent

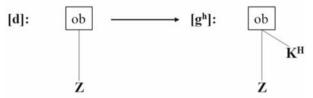
The IPA symbol of this sound is [d], and it has a corresponding letter in both languages: d. It appears in the Hungarian words – in our corpus – 78 times. In 83.33% of the cases (N=65), the phonetic transfer maintains the articulatory features (ex. Hu. eredni [ɛrɛdni] > Rom. arădui [ärədui]; Hu. gazda [gəzdə] > Rom. gazdă [gäzdə]; Hu. hordó [hordo:] > Rom. hârdău [hirdəu] etc.), and this modality of transfer does not depend on the phonological environment.



7.69% (N=6) of the words in the analysed corpus show the [d] \rightarrow [t] change. This transfer modality appears both when the Hungarian sound is in a stressed

syllable and it is transferred into a stressed syllable in Romanian (Hu. dob [dob] > Rom. tobă [toba]; Hu. várda [va:rdo] > Rom. vartă [värtə]), as well as in the case when the stressed syllable in Hungarian becomes unstressed in Romanian (Hu. alkudni [əlkudni] > Rom. alcătui [älkətui]; Hu. hadnagy [hɔdnɔʒ] > Rom. hotnog [hoṭnog]; Hu. ütődött [ytø:døt:] > Rom. hututui [hututui]; Hu. spikinard [ʃpikinərd] > Rom. spiclinat [spiklinät]).

Another phonetic transfer modality is dropping the sound from the structure of the borrowings (ex. Hu. szabadság [səbəṭʃ:a:g] > Rom. săbăşag [səbəʃäg], Hu. szabad [səbəd] > Rom. nesăbuit [nesəbuit]; Hu. horzsolódni [horʒolo:dni] > Rom. hârjoni [hirʒoni]).



A fourth phonetic transfer modality is $[d] \rightarrow [g^h]$; it is present in two words in our corpus (ex. Hu. *dibiny* [dibin] > Rom. *ghiob* [g^h iob]; Hu. *eredni* [eredni] > Rom. *hereghie* [hereghie]). In these examples, we could identify the change of the place of articulation: the alveolar consonant in Hungarian becomes a velar, aspirated one in Romanian.

In the last two identified modalities, a major change can be observed in the manner of articulation: obstruents become sonorants. In the generative phonological illustrations, this change appears in the modification of the reference point.



In the example Hu. *kérkedni* [ke:rkɛdni] > Rom. *chercheli* [kʰe̞rkʰe̞li], we observe that the stop, alveolar, voiced obstruent becomes a voiced, alveolar, approximate sonorant.



The last phonetic adaptation modality can be observed in the example Hu. csudafa [fudofo] > Rom. ciumăfaie [fumofăie]. Here, the voiced, stop, alveolar, obstruent becomes a voiced, bilabial, nasal sonorant.

In conclusion, we can establish six phonetic transfer modalities (Table 6):

Table 6. The phonetic adaptation modalities of the [d] sound

	Noticed phenomenon	Change of sound	Changes in articulation features	
1.	maintaining the articulation features	[d] = [d]	-	scheme (83.33%)
2a.	change of one	$[d] \rightarrow [t]$	voicing : voiced \rightarrow voiceless	modality
2b.	articulation feature	$[d] \to [g^h]$	place : alveolar → velar aspirated	modality
3.	change of two articulation features	$[d] \rightarrow [1]$	manner: obstruent → sonorant; stop → approximate	modality
4.	change of three articulation features	$[d] \to [m]$	manner: obstruent \rightarrow sonorant; stop \rightarrow nasal place: alveolar \rightarrow bilabial	modality
5.	drop of the sound from the structure of the borrowing	[d]↓	_	modality

2.4. Voiceless, alveolar obstruent

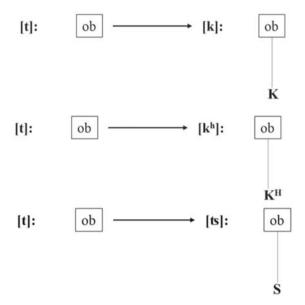
The IPA symbol of this sound is [t], and it has a corresponding letter in both languages: t. It appears in the Hungarian words – in our corpus – 78 times. In 90.9% (N=170), the phonetic transfer maintains the articulatory features (Hu. alkotni [ɔlko̩tni] > Rom. alcătui [alkətui]; Hu. bolt [bolt] > Rom. boltă [boltā]; Hu. katlan [kətlən] > Rom. cotlon [ko̞tlo̞n]; Hu. lakatos [ləkətoʃ] > Rom. lăcătuș [ləkətuʃ], etc.), and this transfer modality does not depend on the phonological environment.

In 4.27% (N=8) of the sounds, the dropping of the sound from the structure of the borrowing could be observed (Hu. k"olts'eg [køltʃe:g] > Rom. chelşug [kʰe̞lʃug]; Hu. csoport [ʧoport] > Rom. ciopor [ʧoport]; Hu. dobostorta [doboʃtorto] > Rom. dobos [do̞boʃ]; Hu. u't'od'ott [ytø:døt:] > Rom. hututui [hututui]; Hu. s'ohajt [ʃo:hɔjt] > Rom. sioi [ʃioi]; Hu. szaggatni [sɔg:ɔtni] > Rom. soage [so̞ädʒe̞]). In the majority of these cases, the sound is dropped together with the syllable containing it. In other cases, we identify the phenomenon of the apocope.²

In our research corpus, there are three examples for words where [t] becomes [k], ex. Hu. sötét [ʃøte:t] > Rom. şutic [ʃutik]; Hu. hitlen [hitlɛn] > Rom. viclean [viklean]; Hu. hitlenség [hitlɛnʃe:g] > Rom. vicleşug [vikleʃug]. In this phonetic

² Apocope: drop of a sound or group of sounds from the end of the word (DIMITRESCU 1978: 121).

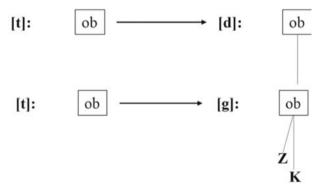
adaptation modality, we can identify a subtype, the aspirated pronunciation of [k]: Hu. $bet ilde{u}$ [bety:] > Rom. bechiu [bekhiu].



There are two examples for the change of [t] in [ts]: Hu. csikolto [tsikolto:] > Rom. ciocalteu [tsigkilteu]; Hu. darabant [dorobant] > Rom. dorobant [dorobants]. In this case, the manner of articulation is changed (stop \rightarrow affricate).

In the case of two words, there is a $[t] \rightarrow [d]$ change (ex. Hu. $hajt\delta$ [hɔjto:] > Rom. $haid\check{a}u$ [häidəu]; Hu. $mer\acute{t}t\delta$ [mɛri:tø:] > Rom. meredeu [meredeu]). We observe as well that in these cases the [d] sound is always followed by a diphthong in the Romanian borrowings.

The last phonetic adaptation modality is the change of the [t] consonant into [g]: Hu. pántlika [pa:ntlika] > Rom. panglică [päŋglika].



The voiceless, alveolar, stop obstruent has, in conclusion, seven phonetic adaptation modalities observable in our research corpus (see *Table 7*).

	Noticed phenomenon	Change of sound	Changes in articulation features	
1.	maintaining the articulation features	[t] = [t]	_	scheme (90.9%)
2a.		$[t] \rightarrow [k]$	place : alveolar \rightarrow velar	modality
2b.	change of one	$[t] \rightarrow [k^h]$	place : alveolar \rightarrow velar aspirated	modality
2c.	articulation feature	$[t] \rightarrow [ts]$	manner: stop \rightarrow affricate	modality
2d.		$[t] \rightarrow [d]$	voicing: voiceless \rightarrow voiced	modality
3.	change of two articulation features	$[t] \rightarrow [g]$	place: alveolar → velar; voicing: voiceless → voiced	modality
4.	drop of the sound from the structure of the borrowing	[t]↓	-	modality

Table 7. The phonetic adaptation modalities of the [t] sound

2.5. Voiced, velar obstruent

The voiced, velar stop has the [g] IPA symbol and its corresponding letter is g both in Hungarian and Romanian. This sound appears in our research corpus 106 times.

The typical adaptation scheme for this sound is maintaining the articulatory features in 88.67% (N=94) of the cases. This adaptation modality does not have any phonological preconditions, it can appear in any phonotactic environment (ex. Hu. egres [egref] > Rom. agriş [ägrif]; Hu. vágás [va:ga:f] > Rom. făgaş [fəgäf]; Hu. jószág [jo:sa:g] > Rom. iosag [josäg]; Hu. nadrág [nɔdra:g] > Rom. nădrag [nədräg]; Hu. agár [ɔga:r] > Rom. ogar [ogär], etc.).

The voiced, velar stop sound has five other phonetic transfer modalities. The first is produced by changing the place of articulation (velar \rightarrow bilabial). There are five examples for this modality: Hu. targonca [tərəbəantə] > Rom. tărăboanță [tərəbəantə]; Hu. gugyor [guyor] > Rom. budur [budur]; Hu. guba [gubə] > Rom. bobou [bəbəu] and Hu. gomb [gomb] > Rom. bumb [bumb].



We have to mention that this change is produced when the [g] sound has $[\mathfrak{d}]$ as antecedent and the $[o\ddot{a}]$ diphthong and [u] vowel as postcedents.

There are four examples for another adaptation modality, which can be observed in our corpus: Hu. morog [morog] > Rom. morocăni [morokəni]; Hu. salugáter [ʃɔluga:ter] > Rom. şolocat [ʃolokät]; Hu. cájg [tsa;jg] > Rom. ṭaică [tsäjkə].

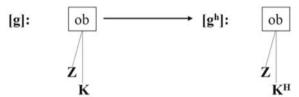


We can notice in the illustration the drop of the Z element (voiced sound), this phenomenon occuring in the phonotactic situation where the sound has the [o, j, e] sounds as antecedents and [o, o, iu] as postcedents.

There are two words which drop the [g] sound (Hu. szaggatni [sɔg:ɔtni] > Rom. soage [soädʒe]; Hu. betegség [bɛtɛkʃe:g] > Rom. beteşug [beteʃug]).

We note that in the case of the first word the sound is not dropped from the structure, but – because in Romanian there are no consonants with long pronunciation – it is shortened. In the other word, we encounter a consonant syncope.³

At the same time, there is one example (Hu. tingilingi [tinglingi] > Rom. tinghi-linghi [tinghi-linghhi]) for the situation where the consonant is pronounced aspirated.



We note that both sounds of the word which undergo this transfer have [n] as antecedent and [i] as postcedent.

The last phonetic adaptation modality of this sound that occurs in our corpus is similar to the previous one (Hu. *tengeri* [tengeri] > Rom. *tenchi* [tenkhi]).



In the case of this transfer modality, we notice that, besides the fact that the sound is pronounced aspirated, it drops the Z (voiced) element as well, so the

³ Syncope: drop of a sound or groups of sounds between two sounds inside the word (DIMITRESCU 1978; 121).

corresponding sound in the borrowing becomes voiceless. The phonotactic situation is identical to the above.

Based on our research, we found the following phonetic transfer modalities to the sound [g] (see *Table 8*):

	Table 6. The phonene dauptation modulities of the [g] sound						
	Noticed phenomenon	Change of sound	Changes in articulation features				
1.	maintaining the articulation features	[g] = [g]	_	scheme (88.67%)			
2.	maintaining the articulation features with aspirated pronunciation	$[g] \rightarrow [g^h]$	aspirated pronunciation	modality			
3a.	change of one	$[g] \rightarrow [b]$	place: velar → bilabial	modality			
3b.	articulation feature	$[g] \rightarrow [k]$	voicing: voiced \rightarrow voiceless	modality			
4.	drop of the sound from the structure of the horrowing	[g]↓	_	modality			

Table 8. The phonetic adaptation modalities of the [g] sound

2.6. Voiceless, velar obstruent

The voiceless, velar obstruent stop has the IPA symbol [k] and it has an articulatory correspondent in both languages. The grapheme corresponding to this sound is k in Hungarian and in Romanian is marked with two letters: c and k. This sound appears 180 times in the Hungarian words of our corpus.

As in the other cases discussed above, this sound has only one phonetic transfer modality that can be considered a scheme: maintenance of the articulation features. The percentage of these sounds in our corpus is 84.44% (N=152).

Such words are for example: Hu. *abrak* [ɔbrɔk] > Rom. *abrac* [äbräk]; Hu. *bicska* [biʧkɔ] > Rom. *brişcă* [briʃkɔ]; Hu. *csonka* [ʧonkɔ] > Rom. *cionc* [ʧionk]; Hu. *csuka* [ʧukɔ] > Rom. *ciucă* [ʧiukɔ]; Hu. *kocsi* [koʧi] > Rom. *cocie* [koţfie], etc.

In the case of this sound, we notice another phonetic adaptation modality, which appears in a significant number (11.66%, N=21) consisting of the aspirated pronunciation of the sound in the borrowing.

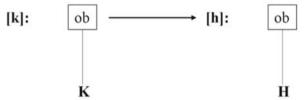


This involves the change of the K element in K^H (ex. Hu. $k\ddot{o}lts\acute{e}g$ [kølʧe:g] > Rom. chelsug [kʰe̞lʃug]; Hu. $k\acute{e}zes$ [kɛzɛʃ] > Rom. chezas [kʰe̞zäʃ]; Hu. $k\acute{e}p$ [ke:p] > Rom. chip [kʰip]; Hu. dikics [dikiʧ] > Rom. dichici [dikʰiʧ], etc). We notice in the analysed corpus that this change appears when the sound has antecedents such as [r, e, i, o, u] and [e, i] as postcedents. These sound groups (letter groups) were introduced in the Romanian alphabet as che, chi.

There are four words which drop the [k] sound from the borrowing: Hu. kenkdö [kenkdø]⁴ > Rom. chindeu [kʰindeu]; Hu. kukkadoz [kuk:ɔdoz] > Rom. cucăi [kukəi]; Hu. hasker [hɔʃker] > Rom. hârşie [hɨrʃie], and Hu. mogádok [moga:dok] > Rom. mogâldeaṭă [mogildeätsə].

We notice two aspects: in the case of the word Rom. *cucăi*, in fact, there is no consonant syncope, but a simple contraction of pronunciation duration. The [k] sound is maintained in the phonetical body of the word. The other two words are adapted with not only dropping the sound, but also the whole syllable.

We have two examples where the change of a phonetic feature of the sound can be observed. This is the change of the representative element of the sound: the K (velar) changes into H (prolonged).



The words in the corpus are: Hu. *matikálni* [mɔtika:lni] > Rom. *mătăhăi* [mətəhəi] and Hu. *tárkony* [ta:rkon] > Rom. *tarhon* [tärhon].

Finally, we have a word (Hu. $mell\acute{e}k$ [mɛl:e:k] > Rom. meleag [meleag]) in which the addition of an element can be observed, so that by the addition of the Z (voiced) element, the [k] sound becomes [g].



On the basis of the above, we find the following modalities of phonetic adaptation for the [k] sound (see *Table 9*):

⁴ In the case of this word, we must mention that it was probably misspelled in NDULR (p. 296, col. III) and the proper form would be *kendő* [kɛndø:]. Therefore, we cannot talk about the drop from the middle of the word in the form of a consonant syncope.

_			-	
	Noticed phenomenon	Change of sound	Changes in articulation features	
1.	maintaining the articulation features	[k] = [k]	_	scheme (84.44%)
2.	maintaining the articulation features with aspirated pronunciation	$[k] \to [k^h]$	aspirated pronunciation	modality (11.66%)
3.	change of one articulation feature	$[k] \rightarrow [g]$	voicing: voiceless \rightarrow voiced	modality
4.	change of two articulation features	$[k] \rightarrow [h]$	manner: $stop \rightarrow fricative;$ place: $velar \rightarrow laryngeal$	modality
5.	drop of the sound from the structure of the borrowing	[k]↓	_	modality

Table 9. The phonetic adaptation modalities of the [k] sound

2.7. Voiced, palatal obstruent

The IPA symbol of the voiced, palatal obstruent stop is [J] and it has no articulatory correspondent in Romanian, thereby the qualitative change of the articulatory features of the sound is necessary in the process of phonetic adaptation. The sound in Hungarian is marked with the *gy* grapheme. It appears in the Hungarian words 24 times.

A percent of 33.33% (N=8) of the sounds are adapted in the form of the [&] sound, ex. Hu. agyag [3,52] > Rom. agiag [ä&jäg]; Hu. gyaló [5,10:] > Rom. gealău [&;äləu]; Hu. $h\ddot{o}lgv$ [høls] > Rom. helge [helæ], etc.



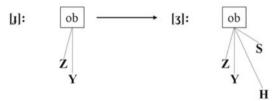
The analysis of the phonetic context has not led to the finding of rules since this change occurs whenever the word and the series of ante- and postcedents is very complex.

A percentage of 20.83% (N=5) of the sounds have undergone the $[\mathfrak{z}] \to [\mathfrak{g}^h]$ change, ex.: Hu. $gy\ddot{o}mb\acute{e}r$ [\mathfrak{z}^h] > Rom. ghimber [\mathfrak{g}^h imber]; Hu. $gy\ddot{u}l\acute{e}s$ [\mathfrak{z}^h] > Rom. ghiulu [\mathfrak{g}^h iulu]; Hu. lengyel [$len\mathfrak{z}^h$] > Rom. lengher [$len\mathfrak{g}^h$ er], etc.



In the words taken as examples, we can notice that this change occurs only when the [1] is the first sound of the syllable.

In 16.66% (N=4) of the sounds, the [<code>j</code>] became [ʒ]: Hu. <code>gyanú</code> [<code>jonu:</code>] > Rom. <code>jenui</code> [<code>ʒenui</code>]; Hu. <code>gyönni</code> [<code>jøn:i</code>] > Rom. <code>joi</code> [<code>ʒoi</code>]; Hu. <code>gyomlálni</code> [<code>jomla:lni</code>] > Rom. <code>jumuli</code> [<code>ʒumuli</code>], and Hu. <code>gyűrűzni</code> [<code>jy:ry:zni</code>] > Rom. <code>jurui</code> [<code>ʒurui</code>].



Although we have few examples, we find that this modality of phonetic adaptation works only when the sound is in the initial position in the word.

Besides the above described phonetic transfer modalities, there are other ones, represented by few examples:

- [ょ] → [g]: Hu. hadnagy [hɔdnaɟ] > Rom. hotnog [hoṭno̞g]; Hu. jobbágy [job:a:ɟ] > Rom. iobag [jobäg];
 - $-[\mathfrak{z}]$ → [d]: Hu. gugyor [gu\u00e4or] > Rom. budur [budur];
 - -[j] → [ʃ]: Hu. hagyma [hɔjmɔ] > Rom. haşmă [häʃmə];
 - $-\left[\mathfrak{z}\right] \rightarrow\left[\mathfrak{r}\right] :$ Hu. $meleg\acute{a}gy\left[\mathfrak{melega}\mathfrak{z}\right] >$ Rom. $melegar\left[\mathfrak{melegär}\right] ;$
 - $-[I] \rightarrow [I]$: Hu. nagyságos [noctf:a:gof] > Rom. nociagos [notfiagof];
 - -[ֈ] ↓: Hu. bugyli [buֈli] > Rom. bulicher [bulikʰe̞r].

Table 10. The phonetic adaptation modalities of the [4] sound

		-	
Noticed phenomenon	Change of sound	Changes in articulation features	
1a. change of one	$[\mathfrak{z}] \to [g^h]$	place: palatal \rightarrow velar aspirated	scheme (20.83%)
1b. articulation feature	$[1] \rightarrow [q]$	place: palatal \rightarrow alveolar	modality
1c.	$[\mathfrak{z}] \rightarrow [\mathfrak{g}]$	place: palatal \rightarrow velar	modality
2a. change of two	$[1] \to [q]$	manner: stop → affricate; place: palatal → post-alveolar	scheme (33.33%)
articulation 2b. features	[1] → [3]	manner: $stop \rightarrow fricative;$ place: palatal $\rightarrow post-alveolar$	modality

	Noticed phenomenon	Change of sound	Changes in articulation features	_
3a.		$[1] \to [l]$	manner: stop → fricative; place: palatal → post-alveolar; voicing: voiced → voiceless	modality
3b.	change of three articulation features	$[\mathfrak{f}] \to [\mathfrak{f}]$	manner: stop → affricate; place: palatal → post-alveolar; voicing: voiced → voiceless	modality
3с.	-	$[\mathfrak{f}] \to [\mathfrak{t}]$	manner: obstruent → sonorant; stop → trill; place: palatal → alveolar	modality
4.	drop of the sound from the structure of the borrowing	[1]↑	-	modality

2.8. Voiceless, palatal obstruent

The voiceless, palatal, obstruent stop has the [c] IPA symbol, and it has no articulatory correspondent in Romanian, this requiring qualitative change in the process of phonetic adaptation. The corresponding grapheme is Hungarian is *ty*, and this sound appears 10 times in our corpus.

Since it is such a small number, we cannot afford to establish certain conclusions through a detailed analysis.

There are four words that were borrowed by modifying the [c] sound into [t]: Hu. bástya [ba:ʃcɔ] > Rom. baştie [bäʃtie]; Hu. kallantyú [kɔl:ɔncu:] > Rom. colătău [koltəu]; Hu. mátyás [ma:ca:ʃ] > Rom. matiaş [mätiäʃ] şi Hu. patyolat [pɔcolɔt] > Rom. potilat [potilăt].

We have two words where we can observe the change of [c] into [k]: Hu. kόtyavetye [ko:cɔvεcε] > Rom. cochii-vechii [kokhi:vɛkhi:] and Hu. fátyol [fa:col] > Rom. fachiol [fäkhiol].

Still, in two words, the [c] \rightarrow [\mathfrak{g}] adaptation modality is present: Hu. *konty* [konc] > Rom. *conci* [kont]] and Hu. *pityóka* [pico:kə] > Rom. *picioică* [pitfiejkə].

There is a word in the corpus which shows the $[c] \rightarrow [d]$ modality: Hu. $b\acute{a}tya$ [ba:co] > Rom. bade [bäde].

In the case of this sound, we do not establish schemes given that it occurs in a small number. All of the noticed phonetic transfer methods are considered modalities (see *Table 11*).

	1	<u> </u>	
Noticed	Change of	Changes in articulation	
phenomenon	sound	features	
1a. change of one	$[c] \rightarrow [t]$	place: palatal → alveolar	modality
1b. articulation feature	$[c] \rightarrow [k^h]$	place: palatal \rightarrow velar aspirated	modality
2a. change of two articulation	$[c] \rightarrow [d]$	place: palatal → alveolar; voicing: voiceless → voiced	modality
2b. features	$[c] \to [\mathfrak{f}]$	manner: $stop \rightarrow affricate;$ place: palatal $\rightarrow post-alveolar$	modality

Table 11. The phonetic adaptation modalities of the [c] sound

3. Conclusions

As in the process of borrowing and phonetic adaptation it is possible to have changes on the level of articulation manner, place, and duration, we are going to formulate several conclusions considering these factors.

The 8 analysed phonemes have 41 phonetical adaptation modalities in total, on average, 5 different modalities of adaptation per sound. The sounds that have articulation correspondents in the two languages [b, p, d, t, g, k] feature the adaptation modality which consists of maintaining the articulation features.

On the level of the manner of articulation, we can establish the following types of changes: (1) stop \rightarrow fricative: [b] \rightarrow [v], [k] \rightarrow [h], [\mathfrak{z}] \rightarrow [\mathfrak{z}], [\mathfrak{z}] \rightarrow [\mathfrak{z}]; (2) stop \rightarrow approximate: [d] \rightarrow [l]; (3) stop \rightarrow nasal: [d] \rightarrow [m]; (4) stop \rightarrow affricate: [t] \rightarrow [ts]; [\mathfrak{z}] \rightarrow [ts]; [\mathfrak{z}] \rightarrow [ts]; (5) stop \rightarrow trill: [\mathfrak{z}] \rightarrow [r]. There are three examples for the change of an obstruent feature into sonorant ([d] \rightarrow [l], [d] \rightarrow [m], [\mathfrak{z}] \rightarrow [r]).

On the level of the place of articulation, we are going to see changes for alveolar, velar, bilabial, and palatal sounds.

The alveolar sounds can become – in the light of our corpus – velar with aspirated pronunciation ($[d] \rightarrow [g^h], [t] \rightarrow [k^h]$), velar ($[t] \rightarrow [k], [t] \rightarrow [g]$), and bilabial ($[d] \rightarrow [m]$) (see *Figure 1*).

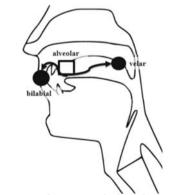


Figure 1. Changes of alveolar sounds

The velar sound can become laryngeal ([k] \rightarrow [h]) or bilabial ([g] \rightarrow [b]) (see Figure 2).

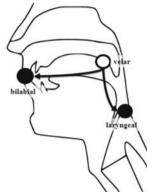


Figure 2. Changes of velar sounds

In our research corpus, the bilabial sound can become labiodental ([b] \rightarrow [v]). Finally, the palatal sounds have four modalities of changing. They can become velar with aspirated pronunciation ([\mathfrak{z}] \rightarrow [\mathfrak{g}], [\mathfrak{c}] \rightarrow [\mathfrak{k}]), velar ([\mathfrak{z}] \rightarrow [\mathfrak{g}]), alveolar ([\mathfrak{z}] \rightarrow [\mathfrak{d}], [\mathfrak{z}] \rightarrow [\mathfrak{r}], [\mathfrak{c}] \rightarrow [\mathfrak{t}]) (see *Figure 3*).

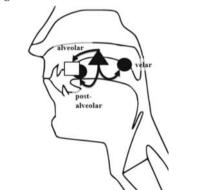


Figure 3. Changes of palatal sounds

On the level of voicing, we have examples for both the voiced \rightarrow voiceless ([b] \rightarrow [p], [d] \rightarrow [t], [g] \rightarrow [k], [\downarrow] \rightarrow [\downarrow], [\downarrow] \rightarrow [\downarrow] and voiceless \rightarrow voiced ([p] \rightarrow [b], [t] \rightarrow [d], [t] \rightarrow [g], [k] \rightarrow [g], [c] \rightarrow [d]) changes.

Finally, there are examples for the drop of the sound from the phonetic structure of the words ($[d]\downarrow$, $[t]\downarrow$, $[g]\downarrow$, $[k]\downarrow$, $[t]\downarrow$).

References

- Alexics, György. 1888. *Magyar elemek az oláh nyelvben* [Hungarian elements in the language of the Vlachs]. Budapest: Hornyánszky Viktor Könyvnyomdája.
- Bakos, Ferenc. 1982. *A magyar szókészlet román elemeinek története* [The history of Romanian elements of the Hungarian lexicon]. Budapest: Akadémiai Könyvkiadó.
- Benő, Attila. 2008 Kontaktológia. A nyelvi kapcsolatok alapfogalmai [Language contact. Fundamental concepts of language contact]. Cluj-Napoca: Egyetemi Műhely Kiadó, Bolyai Társaság.
- Blédy, Géza. 1942. *Influența limbii române asupra limbii maghiare* [The influence of Romanian on the Hungarian language]. Sibiu.
- Bussman, Hadumod. 1998. Routledge dictionary of language and linguistics. London New York: Routledge.
- Dimitrescu, Florica (ed.). 1978. *Istoria limbii române Fonetică, Morfosintaxă, Lexic* [History of Romanian language Phoentics, Morphosyntax, Lexicology]. București: Editura Didactică și Pedagogică.
- Grecu, Victor V. 2004. *Istoria limbii române* [The history of the Romanian language]. Cluj-Napoca: Editura Scientia.
- Hasselblatt, Cornelius—de Jonge, Bob—Norde, Muriel. 2010. Introduction. In: Norde, Muriel—de Jonge, Bob—Hasselblatt (eds), *Language contact*. Amsterdam Philadelphia: John Benjamins Publishing Company.
- International Phonetic Association. 1999. *Handbook of the International Phonetic Association*. Cambridge: Cambridge University Press.
- Kiraly, Francisc. 1990. *Contacte lingvistice: adaptarea fonetică a împrumuturilor românești de origine maghiară* [Language contacts: phonetic adaptation of Hungarian borrowings in Romanian]. Timișoara: Editura Facla.
- Kis, Emese. 1975. Încadrarea substantivelor de origine maghiară în sistemul morfologic a limbii române [Framing of Hungarian-origin nouns in the morphological system of the Romanian language]. București: Editura Academiei Republicii Socialiste România.
- Márton, Gyula. 1965. Observații asupra încadrării vocalelor ă și î în împrumuturile românești ale limbii maghiare [Observations on categorizing the vowels ă and î in the Hungarian-origin borrowings in Romania]. In: Iorgu Iordan (ed.), Omagiu lui Alexandru Rosetti [Homage to Alexandru Rosetti]. București: Editura Academiei Republicii Socialiste România.
- Rosetti, Alexandru. 1978. *Istoria limbii române I. De la origini pînă la începutul secolului al XVII-lea* [The history of Romanian language I From its origins to the early seventeenth century]. București: Editura Științifică și Enciclopedică.

- Siemund, Peter. 2008. Language contact. In: Siemund, Peter–Kintana, Noemi (ed.), Language contact and contact languages. Amsterdam Philadelphia: John Benjamins Publishing Company.
- Siptár, Péter. 2003. Hangtan [Phonology]. In: É. Kiss–Kiefer– Siptár, *Új magyar nyelvtan* [New Hungarian grammar]. Budapest: Osiris Kiadó.
- Thomason, Sarah G. 2001. *Language contact*. Edinburgh: Edinburgh University Press.
- Todoran, Romulus. 1965. Despre influența maghiară în lexicul graiurilor românești din Transilvania [On the influence of Hungarian in the lexicon of Transylvanian Romanian dialects]. In: Iorgu Iordan (ed.), *Omagiu lui Alexandru Rosetti* [Homage to Alexandru Rosetti]. București: Editura Academiei Republicii Socialiste România.

Sources

NDULR = Oprea, Ioan—Pamfil, Carmen-Gabriela—Radu, Rodica—Zăstroiu, Victoria. 2009. *Noul dicționar universal al limbii române* [The new universal dictionary of Romanian language]. București: Editura Litera Internațional.