

Phonetic Adaptation of Hungarian Loanwords in Romanian

The Adaptation of Stop Sounds (Occlusive Plosives)

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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 Greco 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 (Greco 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.

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

	LABIAL		ALVEOLAR		PALATAL		VELAR	
	voiceless	voiced	voiceless	voiced	voiceless	voiced	voiceless	voiced
stops	[p]	[b]	[t]	[d]	[c]	[j]	[k]	[g]

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

	LABIAL		ALVEOLAR		PALATAL		VELAR	
	voiceless	voiced	voiceless	voiced	voiceless	voiced	voiceless	voiced
stops	[p]	[b]	[t]	[d]	–	–	[k]	[g]
aspirated stops							[k ^h]	[g ^h]

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 *Új 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 3. *Illustration elements of consonants*

P	labial	N	nasal
Y	postalveolar and palatal	L	lateral
K	velar	R	trill
K^H	aspirated velar	H	duration
Z	voiced obstruent	S	sibilant

2. Analysis

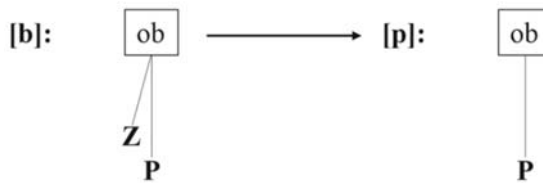
2.1. Voiced, bilabial obstruent

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

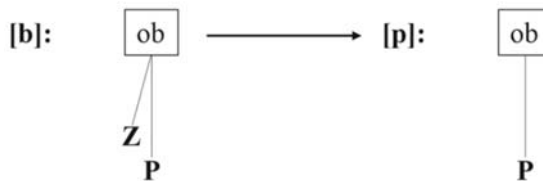
1 In Siptár's terminology: *gyökércsomópont*.

(ex. Hu. *abrak* [əbrək] > Rom. *abrac* [äbräk], Hu. *bábos* [ba:bof] > Rom. *băbaş* [bəbäʃ], Hu. *bakó* [bəkó:] > 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 → fricative, labiodental) (ex. Hu. *plajbász* [pləjba:s] > Rom. *plăivaz* [plăjváz]).



The other adaptation modality is produced with the loss of the Z element (voiced → voiceless) (ex. Hu. *comb* [tsomb] > Rom. *ţîmp* [tsimp]).

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

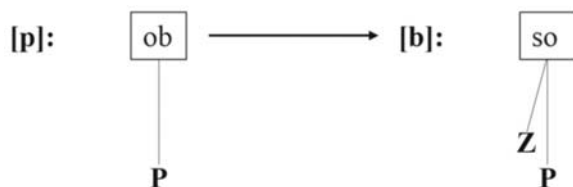
Table 4. *The phonetic adaptation modalities of the [b] sound*

	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] → [p]	voicing: voiced → voiceless	modality
3.	change of two articulation features	[b] → [v]	manner: stop → fricative place: bilabial → labiodental	modality

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* [kələp] > Rom. *clop* [klɔp]; Hu. *paripa* [pəripə] > Rom. *parip* [pərip]; Hu. *pelenka* [peleŋkə] > Rom. *pelincă* [peɫiŋkə]; Hu. *picula* [pitsulə] > Rom. *pițula* [pitsulă] 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 → voiced) (Hu. *képezni* [ke:pezni] > Rom. *chibzui* [k^hibzui] and Hu. *csörpör* [ʃørpør] > Rom. *ciorobor* [ʃiɔrɔbɔr]).

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

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

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

2.3. Voiced, alveolar obstruent

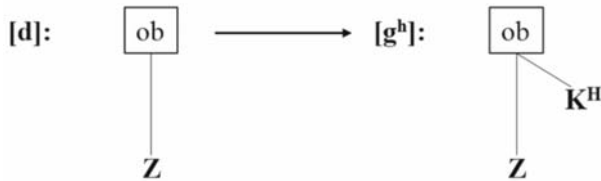
The IPA symbol of this sound is [d], and it has a corresponding letter in both languages: **d**. It appears in the Hungarian words – in our corpus – 78 times. In 83.33% of the cases (N=65), the phonetic transfer maintains the articulatory features (ex. Hu. *eredni* [ereɲni] > Rom. *arădui* [ərəɲui]; Hu. *gazda* [gəzdə] > Rom. *gazdă* [gəzdə]; Hu. *hordó* [hordɔ:] > 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] → [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* [tɔbə]; Hu. *várda* [va:rdə] > Rom. *vartă* [værtə]), as well as in the case when the stressed syllable in Hungarian becomes unstressed in Romanian (Hu. *alkudni* [ɔlkudni] > Rom. *alcătui* [ălkətui]; Hu. *hadnagy* [hɔdnɔɟ] > Rom. *hotnog* [hɔtnɔg]; Hu. *ütődött* [ytø:døt:] > Rom. *hututui* [hututui]; Hu. *spikinar* [ʃpikinər] > Rom. *spiclinat* [ʃpiklinət]).

Another phonetic transfer modality is dropping the sound from the structure of the borrowings (ex. Hu. *szabadság* [sɔbɔʃ:a:g] > Rom. *săbășag* [səbəʃäg], Hu. *szabad* [sɔbəd] > Rom. *nesăbuit* [neʃəbuit]; Hu. *horzsolódni* [horzolo:dni] > Rom. *hârjoni* [hırzɔni]).



A fourth phonetic transfer modality is $[d] \rightarrow [gʰ]$; it is present in two words in our corpus (ex. Hu. *dibiny* [dibiɲ] > Rom. *ghiob* [gʰiɔb]; Hu. *eredni* [ɛrɛdni] > Rom. *hereghie* [hɛrɛgʰiɛ]). 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* [kʰɛrkʰɛli], 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* [ʃudɒfɒ] > Rom. *ciumăfaie* [ʃiuməfäie]. 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 articulation feature	[d] → [t]	voicing: voiced → voiceless	modality
2b.		[d] → [g ^h]	place: alveolar → velar aspirated	modality
3.	change of two articulation features	[d] → [l]	manner: obstruent → sonorant; stop → approximate	modality
4.	change of three articulation features	[d] → [m]	manner: obstruent → sonorant; stop → nasal place: alveolar → bilabial	modality
5.	drop of the sound from the structure of the borrowing	[d]↓	–	modality

2.4. Voiceless, alveolar obstruent

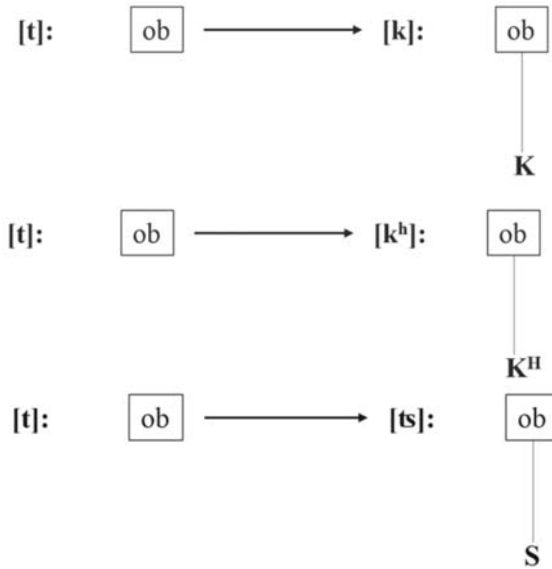
The IPA symbol of this sound is [t], and it has a corresponding letter in both languages: *t*. It appears in the Hungarian words – in our corpus – 78 times. In 90.9% (N=170), the phonetic transfer maintains the articulatory features (Hu. *alkotni* [ɒlkɒtni] > Rom. *alcătui* [ălkətui]; Hu. *bolt* [bolt] > Rom. *boltă* [bɒltă]; Hu. *katlan* [kɒtlɒn] > Rom. *cotlon* [kɒtlɒn]; Hu. *lakatos* [lɒkɒtɒʃ] > Rom. *lăcătuș* [lɒkətʃ], 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. *költség* [kɒltʃeːg] > Rom. *chelșug* [k^hɛlʃug]; Hu. *csoport* [ʃɒport] > Rom. *ciopor* [ʃiɒpor]; Hu. *dobostorta* [dɒbɒʃtɒrtɒ] > Rom. *doboš* [dɒbɒʃ]; Hu. *ütödött* [ytɒːdɒtː] > Rom. *hututui* [hututui]; Hu. *sóhajt* [ʃoːhajt] > Rom. *șioi* [ʃiɒi]; Hu. *szaggatni* [sɒgːɒtni] > Rom. *soage* [sɒɒdʒɛ]). 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* [ʃɒteːt] > Rom. *șutic* [ʃutik]; Hu. *hitlen* [hitlɛn] > Rom. *viclean* [viklɛn]; Hu. *hitlenség* [hitlɛnʃeːg] > Rom. *vicleșug* [viklɛʃug]. In this phonetic

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

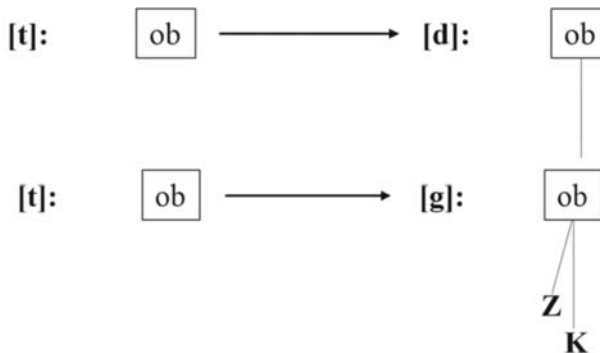
adaptation modality, we can identify a subtype, the aspirated pronunciation of [k]: Hu. *betű* [bety:] > Rom. *bechiu* [bɛk^hiu].



There are two examples for the change of [t] in [ʦ]: Hu. *csikoltó* [ʃikolto:] > Rom. *ciocâlțeu* [ʃiɔkiltʃeu]; Hu. *darabant* [dərəbənt] > Rom. *dorobanț* [dɔrɔbənts]. In this case, the manner of articulation is changed (stop → affricate).

In the case of two words, there is a [t] → [d] change (ex. Hu. *hajtó* [hajtɔ:] > Rom. *haidău* [hăidəu]; Hu. *merítő* [meri:tɔ:] > Rom. *meredeu* [mɛrɛɖeu]). 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:ntlikə] > Rom. *panglică* [pəŋglikə].



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

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

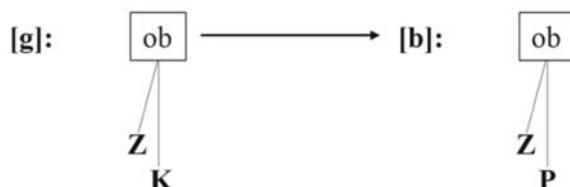
	Noticed phenomenon	Change of sound	Changes in articulation features	
1.	maintaining the articulation features	[t] = [t]	–	scheme (90.9%)
2a.		[t] → [k]	place: alveolar → velar	modality
2b.	change of one articulation feature	[t] → [k ^h]	place: alveolar → velar aspirated	modality
2c.		[t] → [ts]	manner: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

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* [ɛgrɛʃ] > Rom. *agriș* [ägrɨʃ]; Hu. *vágás* [va:ga:ʃ] > Rom. *făgaș* [fägäʃ]; Hu. *jóság* [jo:sa:g] > Rom. *iosag* [iösäg]; Hu. *nadrág* [nədra:g] > Rom. *nădrag* [nədräg]; Hu. *agár* [ɔga:r] > Rom. *ogar* [ɔgär], etc.).

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



We have to mention that this change is produced when the [g] sound has [ə] as antecedent and the [oä] 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* [mɔɾɔkəni]; Hu. *salugáter* [ʃɔluga:ter] > Rom. *şolocat* [ʃɔlɔkät]; Hu. *cájpg* [tsa:jg] > Rom. *ţaică* [tsäjkə].

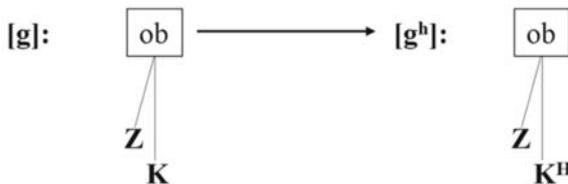


We can notice in the illustration the drop of the Z element (voiced sound), this phenomenon occurring in the phonotactic situation where the sound has the [ɔ, j, ɛ] sounds as antecedents and [ə, ɔ, ɨ, iu] as postcedents.

There are two words which drop the [g] sound (Hu. *szaggatni* [sɔg:ɔtni] > Rom. *soage* [ʃɔädʒɛ]; Hu. *betegség* [betekʃe:g] > Rom. *beteşug* [bɛteʃug]).

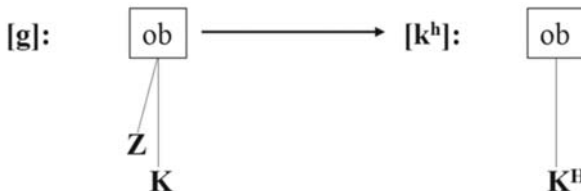
We note that in the case of the first word the sound is not dropped from the structure, but – because in Romanian there are no consonants with long pronunciation – it is shortened. In the other word, we encounter a consonant syncope.³

At the same time, there is one example (Hu. *tingilingi* [tinglingi] > Rom. *tinghi-linghi* [ting^{hi}-ling^{hi}]) 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* [teŋ^{hi}]).



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

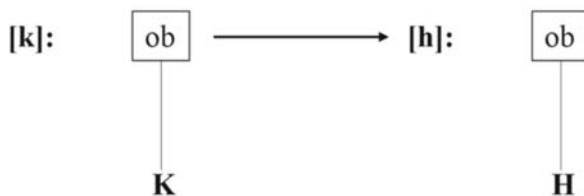
³ *Syncope*: drop of a sound or groups of sounds between two sounds inside the word (DIMITRESCU 1978: 121).

This involves the change of the K element in K^H (ex. Hu. *költség* [køltʃe:g] > Rom. *chelșug* [k^hɛʃʃug]; Hu. *kezes* [kezeʃ] > Rom. *chezaș* [k^hɛzăș]; Hu. *kép* [ke:p] > Rom. *chip* [k^hip]; Hu. *dikics* [dikiʃ] > Rom. *dichici* [dik^hiʃ], 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* [k^hindeu]; Hu. *kukkadoz* [kuk:odoz] > Rom. *cucăi* [kukəi]; Hu. *hasker* [høʃker] > Rom. *hârșie* [hirʃie], and Hu. *mogádok* [moga:dok] > Rom. *mogâldeăță* [moğildeățə].

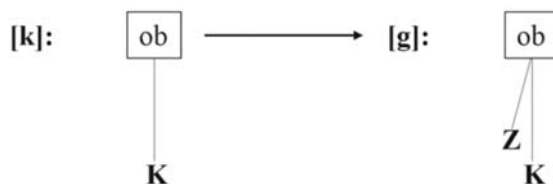
We notice two aspects: in the case of the word Rom. *cucăi*, in fact, there is no consonant syncope, but a simple contraction of pronunciation duration. The [k] sound is maintained in the phonetical body of the word. The other two words are adapted with not only dropping the sound, but also the whole 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* [møtika:lni] > Rom. *mătăhăi* [møtəhəi] and Hu. *tárkony* [ta:rkoŋ] > Rom. *tarhon* [tərhøŋ].

Finally, we have a word (Hu. *mellék* [mæl:e:k] > Rom. *meleag* [meʃəğ]) 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* [kendø:]. Therefore, we cannot talk about the drop from the middle of the word in the form of a consonant syncope.

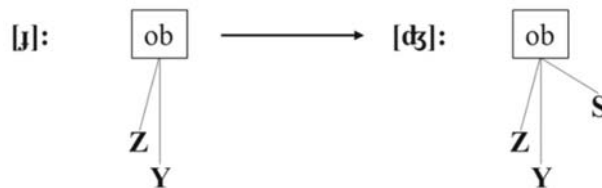
Table 9. *The phonetic adaptation modalities of the [k] sound*

	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] → [k ^h]	aspirated pronunciation	modality (11.66%)
3.	change of one articulation feature	[k] → [g]	voicing: voiceless → voiced	modality
4.	change of two articulation features	[k] → [h]	manner: stop → fricative; place: velar → laryngeal	modality
5.	drop of the sound from the structure of the borrowing	[k]↓	–	modality

2.7. Voiced, palatal obstruent

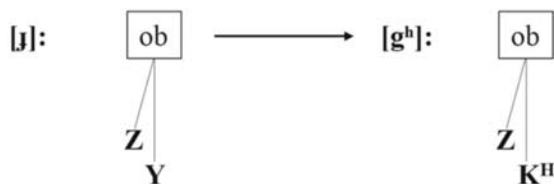
The IPA symbol of the voiced, palatal obstruent stop is [j] and it has no articulatory correspondent in Romanian, thereby the qualitative change of the articulatory features of the sound is necessary in the process of phonetic adaptation. The sound in Hungarian is marked with the *gy* grapheme. It appears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

A percent of 33.33% (N=8) of the sounds are adapted in the form of the [dʒ] sound, ex. Hu. *agyag* [ɒɟɒg] > Rom. *agiag* [äɟɟäg]; Hu. *gyaló* [jɒlo:] > Rom. *gealău* [ɟɟɛäləu]; Hu. *hölgy* [hølj] > Rom. *helge* [hɛłɟɟɛ], etc.



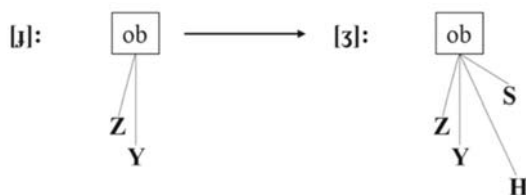
The analysis of the phonetic context has not led to the finding of rules since this change occurs whenever the word and the series of ante- and postcedents is very complex.

A percentage of 20.83% (N=5) of the sounds have undergone the [j] → [g^h] change, ex.: Hu. *gyömbér* [jømbe:r] > Rom. *ghimber* [g^himɸer]; Hu. *gyűlés* [jy:le:j] > Rom. *ghiuluș* [g^hiuluș]; Hu. *lengyel* [leŋjel] > Rom. *lengher* [leŋg^hɸer], etc.



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

In 16.66% (N=4) of the sounds, the [j] became [ʒ]: Hu. *gyanú* [jɒnu:] > Rom. *jenui* [ʒɛnui]; Hu. *gyönni* [jɒn:i] > Rom. *joi* [ʒɔi]; Hu. *gyomlálni* [jɔmla:lni] > Rom. *jumuli* [ʒumuli], and Hu. *gyűrűzni* [jy:ry:zni] > Rom. *jurui* [ʒurui].



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:

- [j] → [g]: Hu. *hadnagy* [hɔdnaj] > Rom. *hotnog* [hɔtnɔg]; Hu. *jobbágy* [job:a:j] > Rom. *iobag* [jɔbäg];
- [j] → [d]: Hu. *gugyor* [gujɔr] > Rom. *budur* [budur];
- [j] → [ʃ]: Hu. *hagyma* [hɔjɒmɔ] > Rom. *hașmă* [hăʃmă];
- [j] → [r]: Hu. *melegágy* [meleɟa:j] > Rom. *melegar* [meleɟär];
- [j] → [ʃ]: Hu. *nagyságos* [nɔɟʃ:a:goʃ] > Rom. *nociagoș* [nɔʃiägoʃ];
- [j] ↓: Hu. *bugyli* [bujli] > Rom. *bulicher* [bulikʰɕr].

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

	Noticed phenomenon	Change of sound	Changes in articulation features	
1a.	change of one articulation feature	[j] → [gʰ]	place: palatal → velar aspirated	scheme (20.83%)
1b.		[j] → [d]	place: palatal → alveolar	modality
1c.		[j] → [g]	place: palatal → velar	modality
2a.	change of two articulation features	[j] → [dʒ]	manner: stop → affricate; place: palatal → post-alveolar	scheme (33.33%)
2b.		[j] → [ʒ]	manner: stop → fricative; place: palatal → post-alveolar	modality

	Noticed phenomenon	Change of sound	Changes in articulation features	
3a.		[ʃ] → [ʃ]	manner: stop → fricative; place: palatal → post-alveolar; voicing: voiced → voiceless	modality
3b.	change of three articulation features	[ʃ] → [ʃ]	manner: stop → affricate; place: palatal → post-alveolar; voicing: voiced → voiceless	modality
3c.		[ʃ] → [r]	manner: obstruent → sonorant; stop → trill; place: palatal → alveolar	modality
4.	drop of the sound from the structure of the borrowing	[ʃ]↓	-	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 in 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. *baștie* [băștiɛ]; Hu. *kallantyú* [kɔl:ɔncu:] > Rom. *colățau* [kɔlətəu]; Hu. *mátyás* [ma:ca:ʃ] > Rom. *matiaș* [mătiăʃ] și Hu. *patyolat* [pɔcolɔt] > Rom. *potilat* [pɔtilăt].

We have two words where we can observe the change of [c] into [k]: Hu. *kótyavetye* [ko:cɔvɛɛ] > Rom. *cochii-vechii* [kɔk^hi:vek^hi:] and Hu. *fátyol* [fa:col] > Rom. *făchiol* [făk^hiɔl].

Still, in two words, the [c] → [ʃ] adaptation modality is present: Hu. *konty* [kɔnc] > Rom. *conci* [kɔnʃ] and Hu. *pityóka* [pico:kɔ] > Rom. *picioică* [piʃiɔjkə].

There is a word in the corpus which shows the [c] → [d] modality: Hu. *bátya* [ba:cɔ] > Rom. *bade* [băde].

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*).

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

Noticed phenomenon	Change of sound	Changes in articulation features	
1a. change of one	[c] → [t]	place: palatal → alveolar	modality
1b. articulation feature	[c] → [k ^h]	place: palatal → velar aspirated	modality
2a. change of two — articulation	[c] → [d]	place: palatal → alveolar; voicing: voiceless → voiced	modality
2b. features	[c] → [ʧ]	manner: stop → affricate; place: palatal → post-alveolar	modality

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 → fricative: [b] → [v], [k] → [h], [ʃ] → [ʒ], [ʃ] → [ʃ]; (2) stop → approximate: [d] → [l]; (3) stop → nasal: [d] → [m]; (4) stop → affricate: [t] → [tʃ]; [ʃ] → [ʧ]; [ʃ] → [ʧ], [c] → [ʧ]; (5) stop → trill: [ʃ] → [r]. There are three examples for the change of an obstruent feature into sonorant ([d] → [l], [d] → [m], [ʃ] → [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] → [g^h], [t] → [k^h]), velar ([t] → [k], [t] → [g]), and bilabial ([d] → [m]) (see *Figure 1*).

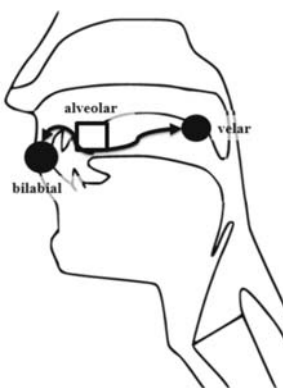


Figure 1. *Changes of alveolar sounds*

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

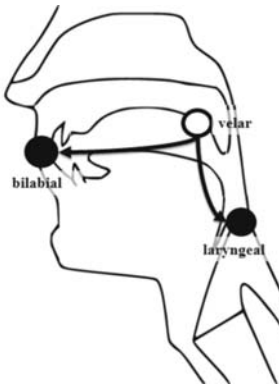


Figure 2. *Changes of velar sounds*

In our research corpus, the bilabial sound can become labiodental ([b] → [v]).

Finally, the palatal sounds have four modalities of changing. They can become velar with aspirated pronunciation ([j] → [g^h], [c] → [k^h]), velar ([j] → [g]), alveolar ([j] → [d], [j] → [r], [c] → [t], [c] → [d]), or post-alveolar ([j] → [dʒ], [j] → [ʒ], [j] → [ʃ], [j] → [ʒʃ], [c] → [tʃ]) (see *Figure 3*).

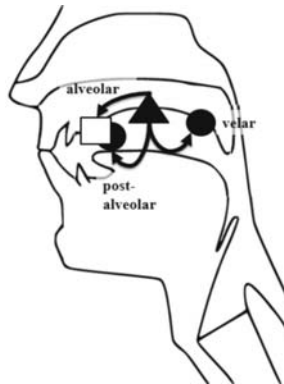


Figure 3. *Changes of palatal sounds*

On the level of voicing, we have examples for both the voiced → voiceless ([b] → [p], [d] → [t], [g] → [k], [j] → [tʃ], [j] → [tʃʃ]) and voiceless → voiced ([p] → [b], [t] → [d], [t] → [g], [k] → [g], [c] → [d]) changes.

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

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