Kurdish Adaptation of Arabic Loan Consonants: A Feature Driven Model of Loan Adaptation

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ABSTRACT

This paper addresses the status of the Arabic loan consonants in Central Kurdish (CK). Based on the Arabic loanwords, it assesses different scenarios on how the foreign consonants are adapted. The paper finds out that Arabic loan consonants in CK can be classified into three groups: Consonants that are part of the phonemic inventory of both languages; consonants that are borrowed faithfully, i.e., without adaptation and finally consonants that are not allowed in the phonemic inventory of CK, i.e. require feature adaptation. The paper also makes contribution to the theories of loan adaptation. It shows that neither Phonological Stance Model nor Phonetic Stance Model can account for the way Arabic consonants are (un)adapted in CK. The faithful borrowing of guttural consonants and the adaptation of dental fricatives and emphatics to match the phonemic inventory of CK shows that there are active marking statements that (dis)allow a combination of features that form a segment. Some other factors also play roles in the faithful borrowing of the loan consonants such as frequency of the loanwords with loan phonemes, orthographic input and the sensitivity of the faithful pronunciation of the loanwords such as the loanwords that are proper names. Common proper names with guttural phonemes are borrowed faithfully.

KEY WORDS: Adaptation, Consonants, Feature Driven, Kurdish, Loan Phonology

1. INTRODUCTION:

Recently, phonologists have shown a great interest in nativisation of loanwords. The focus on loanword stems from the role nativisation plays in understanding L1 phonological system and how L2 elements are integrated into L1. Loanword adaptation often provides the insight for understanding the phonological system of L1 that is not necessarily obvious in the data of native speakers (Kang 2011). It also provides a window for studying how acoustic cues are categorised in terms of the distinctive features relevant to L1 phonological system (Calabrese and Wetzels 2009). Further, loanword adaptation explains how speakers of the borrower language integrate new elements into their phonological system: whether they redeploy existing L1 features to nativise loanwords or employ new features.

There is a wide consensus that word borrowings occur under two different nativisation scenarios both rely on the borrowers' knowledge of the L2 – the donor language. The nativisation models rely on whether the borrowers have access to the underlying or surface representation of the L2 and whether nativisation occurs during production or perception. In the first scenario known as Phonological Stance Model (Paradis and LaCharité 1997; Jacobs and Gussenhoven 2000; LaCharité and Paradis 2005; Paradis and Tremblay 2009), a bilingual speaker, who has access to the underlying representation of L2, generates its surface representation while speaking L1. In this case, the adaptation occurs during speech production. In the second scenario, adaptors fill a gap in their language by borrowing a word from a language they know poorly or not at all. The adaptation of the loanword occurs during perception. This adaptation is called Phonetic Stance Model (Peperkamp and Dupoux 2002, 2003; Kennstowicz 2003; Boersma and Hartman 2009).

However, none of the above models can explain Arabic loanword adaptation in CK. Most loanwords in

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CK are historical in the sense they have entered the language a long time ago and used by monolinguals and speakers with varying degrees of L2 knowledge. As the monolingual speakers do not hear the source form of the loanwords and there is, thus, no reason to postulate that they have access to the underlying form of the loanwords in the source language. On the other hand, the fact that CK has emphatic features as allophones yet adapts Arabic emphatic phonemes shows that adaptors can perceive the emphatic features of the loanwords. CK speakers adapt emphatic sounds by removing the emphatic features. There are three different kinds of consonant adaptation in CK and their adaptation depends on the features of the phonemes in the recipient language. Orthography and sociolinguistic factors also play roles in determining the nature of adaptation. In this paper, based on the adaptation of Arabic loan consonants in CK, I show that neither phonetic nor phonological stance model can account for the loanword nativisation. I also explain that, in line with (Calabrese 2009), feature configuration is the decisive factor in loanword nativisation. Section three discusses how models of loanword phonology account for the CK loanwords, but first, section two looks into the different views on loanwords in CK. The paper also investigates the types of Arabic loanwords in CK and how they are nativized.

2. LOANWORDS IN CK

2.1 Two Views on Loan Phonemes in CK

Two major factors have caused Kurdish lexicon to be hugely influenced by borrowing from neighbouring languages. First, Kurdish is spoken at the nexus of three major linguistic areas: Arabic, Turkish and Farsi. Second, Since Kurdish is not the official language in most of the regions where the Kurds live and thus administration, education and religion are served in the state languages. Further, the fact that different dialects of the language are spoken in different countries has made communications difficult for speakers of different dialects. So, each dialect of Kurdish has extensive contact with the neighbouring languages. Because of a long-shared history, Kurdish shares lexical items, grammatical categories and phonemes with the neighbouring languages, namely; Arabic, Turkish and Farsi.

Determining the origins of the loanwords is not always easy as some of the loans have been borrowed from the third language. Due to religious factors, most of the loanwords travelled in one direction: from Arabic to other languages in the Islamic world. Kurdish speakers have borrowed lexical items directly from Arabic or indirectly from Turkish and Farsi, i.e., the loanwords from Arabic travelled to Farsi and Turkish and then borrowed by Kurdish speakers. The (in)direct borrowing depends on the country where Kurdish is spoken and on the degree of bilingualism of the speakers. Speakers of Kurdish dialects in Iran borrow Arabic lexical items from Farsi; Kurdish speakers in Turkey borrow from Turkish while Kurdish speakers in Iraq and Syria borrow directly from Arabic. In any case, the origin of most loan words is ultimately from Arabic. The contact brought about the influx of vocabulary and the transfer of grammatical categories. Inevitably, the loanwords have brought with them phonemes that are absent in the phonemic inventory of Kurdish.

Kurdish and Arabic belong to two distinct language families with extensive contact: the contact is mainly due to religion, administration and education. In the past, borrowing from Arabic was a means of developing a distinct literary and linguistic tradition. By contrast, in modern era, borrowing (and using loanwords from Arabic) is seen as a threat to the language and the culture. As a result, purification of the language began with the rise of nationalistic thought. According to a study by Abdulla (1980), 46% of a corpus of publications in Iraqi Kurdistan between the years 1924-1939 was loanwords from Arabic. Under the influence of purification, in a corpus of publications between the years 1958-1973, Arabic loanwords reduced to only 4.4%. Synchronically, 10.4% of lexical items in Edmond and Wahby's (1966) dictionary are Arabic loanwords.

There are two opposing views regarding the status of the loanwords and the loan phonemes in CK: The prescriptivists represented by nationalists argue that as there is a native word in all and other Kurdish dialects (for each concept), thus there is no need to use loanwords from neighbouring languages, which were considered languages of the oppressors. Many of them ignore the fact that gutturals (Arabic sounds) exist in their language and ignore them in their writing. That is, they replace a guttural phoneme with a non-guttural one. They coin new words to replace the loanwords: penus for qa.lam 'pen' and ho.nar for ʃa3ir 'poet' for instance. Loans are common in spoken language, less common in written language. Sociolinguistic factors influence the loan usage in spoken language: loanwords are more common in informal and slang language compared to formal situations. Women and younger speakers use fewer loanwords from Arabic. They use strategies to contribute to further adaptation of the loanwords from Arabic such as de-phryngealiation.

Descriptivists represented by linguists, on the other hand, state that Kurdish exhibits a wealth of borrowings which brought with them phonemes and grammatical categories. Khan (1976, p.71) asserts the central role of the loanwords in Kurmanji (Kurdish northern variety), stating that well over 50% of the lexicon is loanwords. In the same vein, Walter (2004) reports that Zazaki's

vocabulary, a variety within the Kurdish language family in Turkey, is permeated with loans from surrounding languages. Chyet (1998, p.110), in particular, points out to the status of loan phonemes in CK; he rejects the position of purging Kurdish from gutturals stating that "Kurdish [….] exhibits gutturals. The entire argument (of purging gutturals) is unscientific and is really a political statement which has no place in scholarly discussion of phonetics and phonology". Thus, linguists regard the loanwords (hence the loan phonemes) as integral part of Kurdish language. Since most the loanwords are borrowed from Arabic – either directly or indirectly through Farsi and Turkish– I'll focus on loans from Arabic.

2.2 Types of Arabic loans in CK

The degree of loanword adaptation is varied and can be classified according to sociolinguistic or phonological factors. Based on the (un)adaptations of consonants, I classify Arabic loanwords in CK into three groups:

a. Loanwords with Phonemes That Exist In CK

This includes the 16 consonants that are available in the consonant inventory of Kurdish and Arabic: the recipient and the donor language. These consonants include /b, m, w, f, t, d, n, r, l, ʃ, dʒ, j, k, h/. When words that include these consonants are borrowed, they are pronounced faithfully; their features are mainly preserved as the following examples show:

TABLE 1
Arabic Loanwords with Phonemes That Exist In CK

Words	Glosses
/mak.tab/	'office'
/sa.lam/	'peace'
/kuɾ.si/	'chair'
/din/	'religion'
/siɨ.jɑ.sat/	'politics'
/maɾ.ka.zi/	'central'
/dun.jɑ/	'world'

The fact that both Arabic and Kurdish have these phonemes should not be understood as these phonemes have exactly the same features in both languages. It is well known that identical phonemes in different languages have different features. Pierrehumbert et al (2000) state that "No known case of two corresponding phonemes in two languages having fully comparable denotations". As for the features of the consonants of the loanwords above, /t, d, n, l/ are alveolar in Standard Arabic while they are alveo-dental in CK. Apart from the incompatible features, some of the phonological processes occur during the borrowing of the loanwords such as degemination and cluster reduction. The difference in features of corresponding phonemes and the following phonological processes will not be pursued here:

- De-geminating the geminates. Many Arabic loanwords with geminates are de-geminated by Kurd speakers as the following examples show:

TABLE 2
Arabic Loanwords with Geminates

Geminated words	Degeminated words	Glosses
ħammɑm	ħamɑm	'bathroom'
sajjɑra	sa.jɑ.ɾa	'car'
bannɑ	banɑ	'builder'

- Cluster reduction by epenthesisation: Although Arabic syllables are usually simple, both in onset and coda, CK does not tolerate complex syllables at all. So, any loan words with complex margins will be simplified by an epenthesis insertion as in:

TABLE 3
Cluster Reduction by Epenthesisation

Consonant Clusters	Epenthesisation	Glosses
kasb	ka.sib	'worker'
kaʃf	kaʃif	'reveal'

b. Loans with Gutturals:

This group includes uvulars /q, ʁ/ and pharyngeals /ħ, ʕ/. These phonemes are left unadapted. The gutturals can be regarded as sounds within the consonant inventory of CK. Although these phonemes are loans, i.e., mainly occur in loanwords, but there are several reasons to regard them as phonemes within the Kurdish consonant inventory. First, the gutturals are borrowed faithfully. The back features are not modified as shown in (4) below:

TABLE 4
Faithful Borrowing of Gutturals

Words with Gutturals	Gutturals Not Modified	Glosses
qu.wa	qu.wat	'strength'
ʁa.ɾib	ʁa.ɾib	'stranger'
raħ.ma	raħ.mat	'mercy'
ʕumɾ	ʕu.miɾ	'age'

Second, Kurdish children can pronounce guttural sounds naturally. Although children start pronouncing the gutturals relatively later than the other consonants, the late start of pronouncing these phonemes is universal; children of languages with gutturals also start pronouncing them later than other consonants. This is particularly observed with Arab children. Third, the gutturals have interfaced with the native phonemes of the language. Some native words with glottal phonemes are realised as pharyngeals as shown in the examples below:

TABLE 5
Interface of Gutturals with Native Phonemes

Words with Glottals	Pharyngealised	Glosses
haf.ta	ħaf.ta	'week'
haft	ħawt	'seven'
ʔɑs.mɑn	ʕɑs.mɑn	'sky'
ʔiʃ	ʕiʃ	'work'

In the examples above, the first consonant of the Kurdish words, which are cognates with Farsi words in the left hand begin with glottals, are realised as pharyngeals. As Matras (2009) states, phoneme borrowing have effect on and interface with the system beyond phoneme inventory enrichment. In the above examples, the pharyngeals interface with closely related glottals. However, Kahn (1976) considers pharyngeal realisation of glottals as hypercorrection of loanwords, and reanalysed as containing pharyngeals. But the left-hand words are not loanwords to be hyper-corrected. It is true that Kurdish share the first three words with Farsi, but those examples along with many other words are cognates rather than loanwords. In any case, the interface of pharyngeal loan phonemes with native glottals can be taken as an evidence for their inclusion in the phonological system of Kurdish.

The entrance of the guttural phonemes can be mainly attributed to the high frequency of the loanwords that include the guttural phonemes. Kurdish proper names that are borrowed from Arabic are very common: names that include gutturals such as ʔah.mad, mu.ħa.mad, ʕuθ.mɑn, ʕa.li, ʕu.maɾ are common proper names in Kurdish. There is a sensitivity towards pronouncing proper names without deformation. Another factor in faithful borrowing of these sounds could be attributed to religion. The Quranic verses that are used in daily prayers include words with gutturals. There is special emphasis on articulating and saying the prayers the way they are pronounced in Arabic—the language of Islam.

c. Loans with dental fricatives /θ,ð/ and phonemic (primary) emphatics /dˤ,ðˤ,sˤ,tˤ/ are usually adapted as shown in the example below:

TABLE 6
Adaptation of Loans with Dental and Emphatics

Loans with Dentals and Emphatics	Modified Loans	Glosses
mɑ. θɑl	mɑ.sɑl	'example'
ðɑ.ki. ɾɑ	zɑ.ki. ɾɑ	'memory'
qɑ.dˤi	qɑ.zi	'judge'
ðˤulm	zu.łim	'oppression'
sˤa.biɾ	sa.biɾ	'patient'
tˤa.maʕ	tamɑħ	'greed'

Due to the absence of dental fricative phonemes /θ, ð/ in CK, they are adapted to /s, z/ respectively whereas the emphatic phonemes lose their back features. The loanwords in (6) above are adapted to match the phonemic inventory of CK. This is clear with (6.iv) where /ðˤ/ a pharyngealised dental fricative is adapted to an alveolar fricative /z/.

2.3 Nativisation of Arabic Loanwords

As stated above, some loanwords are borrowed faithfully, i.e., without any adaptations to the phonemes as in the gutturals where they are borrowed (see examples in 4 above). However, some other loan phonemes are adapted as in the case of dental and emphatic phonemes (se examples 6 above). The crucial question here is why some, but not all, phonemes are adapted. Haspelmath (2009) cites some sociolinguistic factors that influence the degree of adaptation such as the age of the loanword, knowledge of the donor language by recipient language speakers, and their attitude towards the donor language. In addition, I assume there are three other factors that play important roles in faithful borrowing of gutturals in contrast to dentals and emphatics.

a. Imported phonemes are more frequent, and the loanwords with guttural phonemes are more common compared to other loans. One reason for the high frequency of guttural loans is that these loans occur in Farsi and Turkish in addition to Arabic. Arabic proper names with gutturals are very common in Kurdish and other neighbouring languages. Extra attention is given to pronouncing the proper names in Kurdish as they are pronounced in Arabic to keep the Kurdish names as like their Arabic counterparts as possible i.e. keep their phonetic features alike.

Arabic proper names such as /ʕu.maɾ, ʕus.mɑn, ʕa.li, mu.ħa.mad, ʔah.mad, qɑ.diɾ/ are common in CK and pronounced similar to Arabic. Moreover, as Haspelmath (2009) states, if many words come from a single donor language, then there is less need for adaptation, and instead the donor language patterns will be imported along with the words. Thus, Japanese borrows many Chinese words that ended up with long vowels and diphthongs and as a result, these phonological parts have become integral parts of Japanese sound system.

b. Orthographic input also plays role in faithful borrowing of the gutturals. The role of orthography has been stressed in (un) adaptation of loan phonemes (Kenstowicz 2010; Yip 2006; Boersma and Hamann 2009). Kurdish writing system is phonemic—there is one to one correspondence between graphemes and phonemes and there is no silent letters or diagraphs. The loan gutturals /ʕ, ħ, q, ʁ/ are given a letter in the system and in dictionaries while the dental fricatives and the emphatics are not; they are represented by a letter which is close to them phonetically as shown below (from Hassanpour 1992):

TABLE 7
Grapheme representation for Loan phonemes

Arabic letters	Kurdish Counterparts
ط/ tˤ	ت /t
ث/ θ	س/s
ص / sˤ	س/s
ذ / ð	ز /z
ض/ dˤ	ز /z
ظ / ðˤ	ز /z

Thus, in writing Arabic loan words, the letter that represents the voiced alveolar fricative /z/ is used instead of voiced dental fricative /ð/, pharyngealised alveolar plosive /dˤ/ and pharyngealised dental fricative /ðˤ/. Similarly, the letter that represents the voiceless alveolar fricative /s/ is used instead of voiceless dental fricative /θ/ and the pharyngealised alveolar fricative /sˤ/. For guttural phonemes, on the other hand, there is a letter that represents them (ع, ح, ق, غ) for /ʕ, ħ, q, ʁ/ respectively and therefore they are pronounced without modification. Kahn (1976:22) also reiterates the role of orthography in the way phonemes are adapted. She argues that borrowing travelled orally not orthographically when most people were illiterate but when people became literate and an Arabo-Persian script for Kurdish is used, the original is retained under the influence of orthography. That could be a reason guttural are borrowed faithfully but not the dentals or emphatics.

c. The third reason for the faithful borrowing of the gutturals and the adaptation of emphatic and dental fricatives is the phonological factor. As Paradis and Lacharite (2001) state, if the recipient language employs a pharyngeal node, loan guttural phonemes are adapted but never deleted. They explain that 'These can be interpreted as the featural configurations identifying these segments are not completely absent in the borrower language even if the phonemes are absent.' French, Portuguese and Italian delete English /h/ while Spanish, Mandarin Chinese, Greek and Russian adapt them. As the guttural /h/ and /ʔ/ are native CK phonemes, it can be argued that there is a pharyngeal node in CK.

This observation does not explain why pharyngeals are borrowed faithfully but does answer the question why they are not deleted.

3. CK LOAN CONSONANTS AND THE MODELS OF LOAN PHONOLOGY

As outlined above, based on the CK grammar, loan consonants are adapted in different ways: gutturals are borrowed faithfully while dental fricatives and emphatics are adapted. In the following, I show that both models of loanword adaptations— the Phonological Stance Model and the Phonetic Stance Model— fail to account for adaptation of loan words in CK. Most consonants pick out neither phonetic nor phonological matching as explained for the adapted loan phonemes in 3.2.

3.1 Acquisition of Gutturals Through Borrowing

There are no native CK lexical items that include guttural consonants except /h/ and /ʔ/. However, loan words (predominantly from Arabic and rarely from Turkish and Farsi) with gutturals are ubiquitous in CK. These include uvulars /q, ʁ/ and pharyngeals /ħ, ʕ/. The voiced uvular fricative /ʁ/ is also borrowed but as it is in free variation with the voiceless uvular fricative /χ/; it does not have a phonemic status in CK. Rather, it is regarded as the allophone of its voiceless counterpart (Hamid:2016). These loan phonemes. Although entered the phonemic inventory of CK (McCarus 1958, 1997; Fattah 1997; Hamid 2016)), – these loan phonemes have a special status distinct from the native phonemes. The loanwords that contain the loan phonemes are used in spoken language and in particular in slang as opposed to written language or formal spoken speech.

Borrowing of the gutturals is a form of contact-induced language change. The fact that some phonemes are borrowed in contrast to others (see next section) goes in line with Matras (2007) who argues that some patterns are more susceptible to borrowability than others: (Y) is not borrowed until (X) is borrowed as well—verbs are not borrowed until nouns are borrowed. Vowels are not borrowed until consonants are borrowed. Matras also affirms the role of phoneme borrowing in serving the authentic integration of loanwords without distortion; adjusting the phonemic system to accommodate the loan words brings about the authentic integration of loanwords. This interpretation supports the independent role of languages as an autonomous functional system. Therefore, the role of borrowing is to tackle absence of harmony (as a result of absence of a phoneme) among the two systems rather than filling a gap.

Linguists and ordinary non-linguist CK speakers can feel that the gutturals are different from the native CK phonemes. Although this feeling is difficult to assess, it can be sensed in some writings. As Haspelmath (2009) states, if a word is phonologically aberrant, we know it is a loanword even though we do not know the origin of the loanword. In addition to trying to avoid loanwords, some CK writers try to consciously replace /ħ/ with /h/ and /ʕ/ with / ʔ/. This replacement stems from the fact that CK speakers pronounce /ʕ/ as a stop, therefore they replace it with a glottal stop, whereas fricative /ħ/ is replaced with another fricative, namely /h/.

The conscious awareness of speakers towards a set of vocabularies (and hence loan phonemes) can be inspiring to the status of loanwords. In other words, the

speakers' sensitivity to using a certain set of words is an indication that the loanwords have a different status vis a vis the native words. Fries and Pike (1949) argue that loan words cannot constitute a separate phonemic system coexisting with one or more other systems in the same dialect– a phonemic system of a native dialect is single not multiple. Evidence in support of Fries and Pike's argument lies in the reason of adaptation: loanwords are adapted rather than being borrowed faithfully to avoid having two systems in one language. Adaptation shows that there cannot be two systems (grammars) in one language. However, there can be two different strata in one language. This goes in line with Itô and Mester's (1999) division of the lexicon into different strata.

Although there is no valid excuse for excluding the loanwords with guttural phonemes in the lexicon, but there is a clear and strong evidence that the loanwords belong to a different stratum in the lexicon of CK. What distincts the loanwords with guttural phonemes is not only etymological information by having different origins. The partition of lexical items into subsets often have synchronic impact. As Ito and Mester (1999) show for the Japanese lexicon, lexical items which belong to the same subset behave alike in the sense that they are (in)sensitive to some grammatical rules in contrast to another subset of the lexicon (see also Bobaljik 2006). How the subset of the loanword in CK lexicon differs from the native subset in terms of their applicability of certain phonological rules is beyond the scope of this paper.

3.2 Adaptation of Dental Fricatives and Emphatics

CK also borrows words that include dental fricatives /θ, ð/ and phonemic (primary) emphatics /dˢ, ðˢ, sˢ, tˢ/. Unlike the gutturals, these phonemes are adapted rather than being acquired. The dental fricatives /θ, ð/ are adapted to /s, z/ respectively while / dˢ, ðˢ/ are adapted to /z/; / sˢ/ to /s/ and /tˢ/ is adapted to /t/.

Most of the loans are integrated loanwords (entered the lexicon of CK in the past and used by mono-linguals who never heard their source form). So, it is less likely for the loans to be adapted according to the phonological stance model as there is no bilingual access to the source form. It seems that most borrowings from Arabic are not borrowed by proper bi-linguals, but in situations of language contact between mono-lingual or imperfectly bi-lingual speakers. Hence, the role of perception and learning is fundamental. Another argument against phonological stance model comes from the adaptation of Arabic emphatics. Perceived acoustic properties of Arabic emphatics are structured according to the phonological categories of L1, specifically according to CK phonetic features rather than according to the L2 phonological categories. Although the emphatics /tˠɑl, zˠɑl, sˠɑl, dˠɑl/ as a secondary (non-phonemic) feature occur in CK in certain context -through emphatic spread and hence no perception filter for L2 phonemes - the emphatic phonemes are still adapted. In other words, CK speakers filter emphatic features in production although they can perceive them without adaptation.

Phonological Stance Model which claims that borrowers retrieve the underlying form of a loanword then generate its surface form in their native language cannot also explain emphatic loan segments for two reasons. First, the loan emphatics are not always adapted as the example in (10) shows. Second, the loans are integrated loans that have entered the lexicon of the borrowing language in the past and the monolingual speakers may have never heard their original form (Peperkamp and Dupoux 2002). Moreover, as Vendelin and Peperkamp (2006) point out, bilingual speakers differ in the level of proficiency in L2 and speech communities differ with respect to the presence of native speakers of the source language. Kim (2009) also argues that L1 speakers have variable competence in L2 including no knowledge of L2 at all.

As for the Perceptual Stance Model, since the loan gutturals are absent from the consonant inventory of CK, the adaptation is not shaped by the allophonic quality of the consonants, rather, speakers retrieve underlying form of L2 loanwords from their long-term memory and grind it through the grammatical rules of L1. It is true, as Peperkamp and Dupox (2003) state, speakers assign an acoustic output of L2 with the closest acoustic match that can be generated by L1 grammar. However, this acoustic adaptation is not the product of speakers' speech perception of L2. The adaptation is not due to incorrect perception of the emphatic phonemes as it is claimed by the Perceptual Stance Model. The fact that CK phonological system contains velarised phonemes in certain contexts shows that the emphatics are perceived correctly.

As CK anterior consonants are velarised when they are followed by a back vowel and a velarised lateral, one would expect the emphatics to keep their pharyngeal features when they are adapted by CK speakers, i.e. CK has velarised features as in the following words:

TABLE 8
Velarised anteriors next to back phonemes

Velarized Laterals	Glosses
/tˠɑɬ/	'bitter'
/zˠɑɬ/	'dominant'
/sˠɑɬ/	'year'
/dˠɑɬ/	'hawk'

However, loanwords with emphatic features are adapted to lose their guttural features when they are produced by CK speakers as in the examples below:

TABLE 9
Adaptation of Loanwords with Emphatic Features

Loanwords with Emphatic	Adapted Loans	Glosses
/tˢɑ.hiɾ/	/tɑ.ja ɾ/	'clean'
ʕa.sˢiɾ/	/ʕa.siɾ/	'afternoon'
./dˢɑ.hiɾ/	/zɑ.hiɾ/	'visible'

Since a sizable majority of CK speakers are literate in Arabic, they easily distinguish between dental fricatives and their adapted forms: the dental fricatives are not perceived as their adapted forms (as claimed by perceptual stance model) nor modified by bilinguals (as claimed by phonological stance model). Another argument against the perceptual stance model is the articulation of emphatic loan phonemes when meaning is in jeopardy. There is atleast a minimal pair of loanwords that contrast only in the emphatic phonemes with its adapted form. If CK speakers adapted the emphatic segment in (10ii), confusion would arise and meaning would be lost.

za.mɑn 'time' vs zˠa.mɑn 'guarantee'

However, CK speakers are aware of this and pronounce the velarised feature although this is not the phonological context of velarised feature articulation as in the examples of (8) above to avoid misunderstanding za.mɑn with zˠa.mɑn. This shows that emphatic segments are perceived faithfully.

Another evidence against both adaptation models comes from the fact that when CK speakers read or cite a religious text that contains the borrowed phonemes, they pronounce it correctly; i.e., without adaptation. Further, CK speakers are sensitive and quite aware of any adaptation of these phonemes: they detect and correct the adapted form of the loan phonemes in their religious contexts. However, in everyday spoken language, the loanwords from scripture are usually adapted. In other words, most CK speakers pronounce the Arabic words during religious rituals faithfully whereas adapt them to match the phonology of L1 when they use them as loanwords in their native language.

The question is if CK speakers can readily perceive and pronounce foreign phonemes in certain registers (religious texts), why do they adapt them in every day conversation? The answer to this question lies in the grammar of CK. As Calabrese (2009, p.60) points out, there are featural combinations characterising segments that are absent in the production system of particular languages. In other words, there are active marking statements forbidding these feature combinations.

Another evidence for the role of constraints of feature combinations in loanword adaptation comes from the emphatic phonemes. As Hyman (1975) points out, a fact about phonological systems is that segments typically group themselves into phonetically definable classes. Emphatics are often described as coronals with secondary pharyngealisation, uvularisation and velarisation. Coronal obstruent emphatics are seen as primary or phonemic while any other emphatic segments are non-phonemic or secondary. Arabic pharyngeals are produced with the constricted pharynx; description varies on how this is achieved and the exact location of maximal constriction. Old Arabic emphatics are usually /tˢ,dˢ, sˢ, ðˢ/. Most dialects include three of them as /dˢ, ðˢ/ are merged (Bellem 2007). CK speakers' adaptation of the emphatics is triggered by the marking module in the grammar of CK. An obstruent– an alveolar plosive or fricative–combined with a pharyngealised feature is prohibited in the grammar of CK (see 6 above).

Velarised consonants are in complementary distribution with their non-velarised allophones. The adaptation of Arabic consonants in CK demonstrates that both models (phonetic and phonological adaptation of loan words) fail to account for the adaptation. Rather, adaptation operates on abstract featural representations of the source language; the combination of features characterizes the segments or sequence of segments that are absent in the production system of the borrower language (Calabrese 2009). Hence, when the emphatic features and dental fricatives are not allowed by the grammar of CK, they are normally adapted rather than being faithfully borrowed.

Thus, it is the phonological grammar of CK that determines the (un)adaptation of loan phonemes. The adaptations of loan phonemes are dictated by the L1 distinctive features and the combination of features that can form a segment.

4. CONCLUSIONS

Since Kurdish is spoken at the nexus of three major linguistic areas, its lexicon has been heavily influenced by borrowing from other middle eastern languages, especially Arabic. Consequently, some consonant phonemes are borrowed faithfully while some others are adapted to fit the phonology of L1. The inclusion of borrowed phonemes without adaptation within the CK phonemic inventory is mainly due to the amount of loan consonants which has heavily influenced the CK lexicon and the frequency of the loanwords. Orthographic input and phonological factors also contribute to the integration of loan phonemes into CK phonemic inventory. Nevertheless, the borrowed phonemes have a special status in contrast to the native phonemes. CK speakers employ new features for the faithful borrowing while redeploying the existing L1 features to nativise loanwords.

It was also found out that neither Phonological Stance Model nor Phonetic Stance Model can account for the methods of adapting Arabic loanwords in CK. Instead,

feature configuration determines how the loan phonemes are integrated into CK phonemic inventory. Thus, CK active marking statements allow faithful production of guttural segments and disallow dental fricatives and emphatics by adapting their features to match with the feature combinations of L1.

5. REFERENCES

Abdulla, J. (1980) Some aspects of language purism among Kurdish speakers. Ph.D. thesis, University of York.

Bellem, A. (2007) Towards a Comparative Typology of Emphatics. Ph.D. thesis, University of London.

Bobaljik, J. (2006) 'Itelmen reduplication: Edge-In association and lexical stratification.' Journal of Linguistics, 42(01), pp1-23.

Boersma, P. and S. Hamann. (2009) 'Loanword adaptation as first-language phonological perception', in: Calabrese, Andrea. and W. Leo Wetzels (eds.) Loan Phonology, Amsterdam and Philadelphia: John Benjamin, pp11-58

Calabrese, A.)2009(. 'Perception, production and acoustic inputs in loanword phonology', in: Calabrese, A. and W. L. Wetzels (eds.) Loan Phonology, Amsterdam and Philadelphia: John Benjamin, pp 59-114.

Calabrese, Andrea and W. Leo Wetzels. (2009) 'Loan Phonology: issues and controversies', in Loan Phonology, (eds.) Calabrese, Andrea. and W. Leo Wetzels,. Amsterdam and Philadelphia: John Benjamin, pp 1-11

Chyet, M. (1998) 'Kurdish Lexicography a Survey and Discussion'. Iran and the Caucasus, 2(1), pp109-118.

Fattah, M. (1997) A generative grammar of Kurdish. Ph.D. thesis. University of Amsterdam.

Fries, C. and Kenneth, K. (1949) 'Coexistent phonemic systems.' Language, 25(1), 29-50.

Hamid, T. (2016) The prosodic Phonology of Central Kurdish. Ph.D. thesis. University of Newcastle, UK.

Haspelmath, M. (2009) 'Lexical borrowing: Concepts and issues,' in Haspelmath, M and Tadmor, U. Loanwords in the world's languages: A comparative handbook. Berlin" Mouton, pp. 35-54.

Hassanpour, A. (1992) Nationalism and language in Kurdistan, 1918 - 1985. Edwin Mellen.

Itô, J. and Mester, A. (1999) 'The phonological lexicon,' in Tsujimura, T. The Handbook of Japanese Linguistics. pp. 62-100.

Jacobs, H. and Gussenhoven, C. (2000) 'Loan Phonology: Perception, salience, the lexicon and OT,' in Dekkers, J., Leeuw, F. and J. van de Weijer. (eds.) Optimality Theory: Phonology, Syntax and Acquisition. Oxford: Oxford University Press, pp. 193-210.

Kahn, M. (1976) 'Borrowing and Regional Variation in a Phonological Description of Kurdish' Ph.D. thesis. Ann Arbor, Michigan: Phonetics Laboratory of the University of Michigan.

Kang, Y. (2011) 'Loanword Phonology', in: van Oostendorp, M, Colin E, E. Hume, and K. Rice (eds.) The Blackwell companion to phonology. Wiley-Blackwell, pp. 2258-2283.

Kenstowicz, M. (2010). 'Loanword Phonology and Enhancement.' Seoul International conference on Linguistics. Seoul: pp. 104-112.

Kim, H. (2009) 'Korean adaptation of English affricates and fricatives in a feature-driven model of loanword adaptation,' in: Calabrese, A. and W. L. Wetzels (eds.) Loan Phonology, Amsterdam and Philadelphia: John Benjamin, pp 155-180.

LaCharité, D. and Paradis, C. (2005) 'Category preservation and proximity versus phonetic approximation in loanword adaptation.' Linguistic inquiry, 36(2), pp.223-258.

Matras, Y. (2007) 'The borrowability of structural categories.' Grammatical borrowing in cross-linguistic perspective, 38, pp.31-73.

Matras, Y. (2009) Language contact. Cambridge: Cambridge University Press.

McCarus, E. (1958) A Kurdish Grammar: descriptive analysis of the Kurdish of Sulaimaniya, Iraq. Ph.D. thesis. American Council of Learned Societies.

Paradis, C. and LaCharite, D. (1997) 'Preservation and minimality in loanword adaptation.' Journal of Linguistics 33: pp.379-430.

Paradis, C. and LaCharite, D. (2001) 'Guttural deletion in loanwords.' Phonology. 18: pp.255-300.

Paradis, C. and. Tremblay, A (2009) 'Nondistinctive features in loanword adaptation.'' in: Calabrese, A. and W. L. Wetzels (eds.) Loan Phonology, Amsterdam and Philadelphia: John Benjamin, pp.211-224.

Peperkamp, S. and Dupoux, E. (2002) 'A typological study of stress 'deafness'.' Laboratory phonology. 7: pp.203-240.

Peperkamp, S. and Dupoux, E. (2003) 'Reinterpreting loanword adaptations: the role of perception.' Proceedings of the 15th international congress of phonetic sciences (Vol. 367, p. 370).

Pierrehumbert, J. Beckman, M. E. and Ladd, D.R. (2000) 'Conceptual foundations of phonology as a laboratory science,' in: Burton-Roberts, N. ; Carr, P. and Gerard. D. (eds.) Phonological knowledge: Conceptual and empirical issues. Oxford: Oxford: University Press.pp. 273–303.

Vendelin, I. and Peperkamp, S. (2006) 'The influence of orthography on loanword adaptations.' Lingua, 116: pp.996-1007.

Wahby, T. and Edmonds, C. (1966) Kurdish-English Dictionary. Oxford: Oxford University Press.

Walter, M. (2004) 'Loan Adaptation in Zazaki.' Studies in Zazaki Grammar. Cambridge MA.: MIT.

Yip, M. (2006) 'The symbiosis between perception and grammar in loanword phonology.' Lingua 116: pp.950-975.