Heads, I wins; Tails, U loses. Evidence from Arabic loan words in modern Turkish and Uighur

The effect of originally long vowels in Arabic loan words on Turkish and Uighur phonology is illustrated in this paper by three types of exception: disharmony in both languages, a back vowel following a palatalised consonant in Turkish and failure of a~i alternation in Uighur.

Previous analyses of modern Turkish vowel harmony in Government Phonology have tended to concentrate on I-harmony and U-harmony in words where this is regular and predictable, whether in originally Turkic words or loans from another language family. Disharmonic words remain a problem. Most previous analyses have relied upon a full set of element-headed vowels which do not allow for any difference between vowels which harmonise and those which do not. In order to explain the exceptional behaviour of loan words in Turkish and Uighur which had long vowels a:, i: and u: in their original Arabic form, I propose an exceptional set of three headed vowels (\underline{A}), (\underline{I}) and (\underline{U}). These are in addition to the regular standard set which is assumed here to contain a mixture of headless and headed vowels. Only (\underline{I}) is common to both sets, triggering harmony wherever it occurs, whilst (\underline{A}) and (\underline{U}) block I-harmony wherever they occur.

Analyses such as Cobb (1993) for Uighur, or Charette and Göksel (1994,1996) for Turkish, concentrated on defining Licensing Constraints to generate the standard eight vowels, and explain the restrictions on U-harmony. A full set of headed vowels for Turkish and Uighur in which "U must be a head" was proposed to explain why U does not combine regularly with A except in the first vowel of a word. But, U is apparently a weak element in modern Turkish. For example, many non-initial historical vowels u and ü which did not rely on U in the preceding vowel have not survived in modern Turkish, e.g. kapu, now kapi "door"; içün, now için "for". In other Turkic languages where U harmonises differently from the way it does in Turkish, e.g. Kirgiz and Kazak (Charette and Göksel 1994 and1996), there are nevertheless always conditions and restrictions on U, unlike I which is totally unrestricted as far as regular harmony is concerned. Moreover, this device will not work in a language which has both U-harmony and ATR-harmony (analysed in GP in terms of headed and headless vowels) as found in some other Altaic languages (Vaux 1999). I suggest that in the set of eight standard Turkish vowels, only I is a head. I-harmony is blocked in certain loan words whose historical long vowels exceptionally still have A or U as head.

1. Disharmonic words in Turkish and Uighur

Disharmonic words are a problem for previous analyses of Turkish. Specifically, there needs to be an explanation for words like kitap *kitep "book" or mektup *mektüp "letter" where I fails to affect the following vowel, although according to the standard analysis such words should harmonise. Recently Pöchtrager (2009) proposed two different kinds of a, i.e. (A) and (<u>A</u>) to explain why I cannot always spread in Turkish. His insight can be confirmed by looking at the origins of disharmonic words which in Arabic had a long vowel, always a: i: or u:, although these vowels are not necessarily long in modern Turkish. The following two words show a short Arabic **a** which harmonises (1a) and a long **a** (1b) which does not.

(1) a. hizmet "service" (Arabic xidma(t)) b. kira "rent" (Arabic kira: <)

Loan words which contained long vowels in the original Arabic behave in exceptional ways both in Turkish (2a) and in Uighur (2b). Originally long Arabic vowels are not affected by harmony. Long \mathbf{a} and \mathbf{u} do not become e/ä or ü respectively; long \mathbf{i} does not become 1.

(2) a.	Turkish:	kit a p	book	vücut	existence
		meşr u b a t	drinks	siy a sî	political

b.	Uighur:	bin a	building	mäs ula t	harvest
		ziy a pät	party	t a rixiy	historical

2. Palatalised consonants in loan words in Turkish

Certain consonants are usually associated with front vowels. Consonants in loan words from Arabic were perceived historically as either front, back or undecided. Front or back consonants should be followed by a suitable vowel, but there are many mismatches. In particular, in some loan words a back vowel follows a palatalised consonant. Once again, it is the Arabic long vowels **a**: and **u**: that follow the wrong consonant. In modern Turkish orthography these vowels were often marked with a circumflex, although this is no longer necessarily the case in recent dictionaries. The preceding consonants are palatalised.

(3)	eml â k	property	l â zım	necessary
	k â mil	perfect	mahk û m	condemned
	mevl û t	the Prophet's birthday	vil â yet	province

The same also happens in Uighur for example where k generally occurs with e and q with a, as in kamil "perfect" instead of the expected qamil.

3. Failure of a~i alternation in Uighur

In Uighur, historically long Arabic vowels have a further effect. A~i alternation occurs regularly when suffixes are added to a word (4a), (if a single consonant separates the suffix vowel from the last vowel in the word). Sometimes the alternation fails although the context appears to be suitable. A long vowel in an Arabic loan word blocks the alternation (4b).

(4) **Uighur**

a.	bala	child	b.	bal a	calamity
	balilar	children		bal a lar	calamities
	balilirim	my children		bal a lirim	my calamities

In conclusion, I suggest that I, not U, is the only regular element head in Turkish and Uighur, whilst (<u>A</u>) and (<u>U</u>) occur exceptionally in certain loan words. I harmonises as a head, but is blocked by another element head. We are no nearer to explaining or predicting U-harmony other than stating that it spreads into an empty nucleus with or without I to accompany it, but in exchange we have a link between element heads and other phenomena in the languages.

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