

International Journal of English Language & Translation Studies

ISSN: 2308-5460



An Optimal Analysis on [i] to /e/ and [u] to /i/ Vowel Shift in Mashoori Dialect

[PP: 42-49]

Elkhas Veisi

Payam-e Noor University of Ahvaz, Iran

Arezu Molavi Vardanjani

Islamic Azad University of Ahvaz, Iran

ABSTRACT

The present study explores two common vowel alternations in Mashoori dialect, spoken in Mahshahr port, a variation of Modern Standard Farsi, within the framework of optimality theory. To conduct this research, the two alternations represented firstly as the change of the high long vowel /i/ to the mid high vowel [e] and secondly, observed as the back round vowel /u/ turning to the front spread vowel [i] in various phonetic environments. The faithfulness/ markedness constraints involved to account for these phonological processes operate as follows: *V[+tense], *[u] >> IDENT_V [+stressed], IDENT[b,r], IDENT_IO, that suggest the priority of markedness constraints over the faithfulness constraints in Persian dialectal variations rather than the standard Farsi. Besides, the changes show the dynamic nature of Persian vowel system synchronically.

Keywords: Mashoori Dialect, Persian vowel alternation, optimality Theory Mashoori Dialect, Persian vowel alternation, optimality Theory

ARTICLE INFO | The paper received on: **28/03/2016** Reviewed on: **03/05/2016** Accepted after revisions on: **08/09/2016**

Suggested citation:

Veisi, E. & Vardanjani, A. (2016). An Optimal Analysis on [i] to /e/ and [u] to /i/ Vowel Shift in Mashoori Dialect. *International Journal of English Language & Translation Studies*. 4(3), 42-49. Retrieved from www.eltjournal.org

1. Introduction

Farsi has experienced systematic sound changes in pronunciation of the vowel sounds of its phonological system, both in the standard form and its variations. The dialect change patterns occurring in the Southwestern Khuzestan varieties also indicate undeniable pronunciation changes in the region that are to some extent disregarded by linguists. Therefore, the rich lexical vs. phonemic evidences referring to different diachronic vs. synchronic changes observed in MD provide the incentive for the authors to do this research. This paper describes the two most common vowel

alternations, /u/ to [i] and /i/ to [e], happened to occur in MD that make a difference with Standard Farsi (SF), though some of which may share similarities with other variations as well, and tries to investigate what phonological environments would induce the alternations under consideration, as well as to elaborate the process using the universal and violable constraints of Optimality Theory. OT, in general, is a formalism which allows to choose between alternative options for a given situation on the basis of (potentially) contradicting ranked preferences (constraints). This study makes use of the

OT tools to find the answer to the following questions:

- 1- What constraints work here to let the resulting outputs win the floor regarding each alternation under consideration?
- 2- What type of constraints are prevailing in the rivalry of faithfulness vs. markedness constraints?

1.1 Mashoori Dialect

This research investigates one of sub-varieties of Farsi used in the city of Mahshahr, also known as Mashoori dialect (MD), utilized in everyday conversations, no matter of educated, illiterate, young or old people. Mahshahr is one of the ancient ports in the Persian Gulf situated at the extreme northeast of Khuzestan province. Formerly called Mashoor, the city consists of two sections; the old and the new Mahshahr. The new Mahshahr came into existence when a loading facility for oil tankers was constructed in 1945, while the new section is 3km far from the old section. According to the 2001 census, its population was estimated at 100,000. The majority of the population dwells in the old section. The port is bounded on the north by Ahvaz and Ramhormoz; on the east by Behbahan; on the west by Khoramshahr and on the south by the Persian Gulf. If you ask them, some of the inhabitants believe their dialect is Lori, and some think it is kind of Bandari, inherited from Old Southwest Iranian variations and is specifically spoken in their regional neighborhood, in the meantime rather close to dialectal variety of Bushehr and Abadan (Wikipedia, online resources).

However, as Oranski put it, among major dialects of Farsi is Lori which belongs to Lor and Bakhtiari's tribes, spoken in areas spread from the eastern boundaries of Iran-Iraq, between Kermanshah, Borujerd and Khuzestan as well as southwest of Fars

province, named Lorestan. Lor tribes are divided into two main Little vs. Big groups, with the Little ones living in the northwest of the Abzab river in the southern part of Kermanshah stretched toward Dezful in Khuzestan; while Big Lors, also called Bakhtiarians, who live in the southeast of Abzab, spread through southwest of Iran, in Naftoon field at southeast of Shustar, and in Haft gel, Aqajari and Behbahan at east and southeast of Ahvaz (Keshavarz, 1358: 312). So, one can find traces of Lori-Bakhtiari dialect in MD, besides phonemic or lexical evidence from former periods of Persian language (Pahlavi, Dari, etc.) or some borrowed foreign lexical items as indications of historical as well as industrial events of the Province during the contemporary century. So, MD is somehow a close variation of the more general Lori dialect with certain differences from other areas of the province disclosing interesting alternations from phonological perspective that the scope of this research will not allow us to go into more details. According to the knowledge of the authors, the only scientific article on this dialect is that of Molavi Vardanjani & Veisi (2015), except for one manual of dialectal vocabularies and expressions collected by a native speaker of MD Nezarat (1391). However, there are some studies recently conducted on North Khuzestanian dialects, as the Dezfuli dialect and the Andimeshk variation.

1.2 Theoretical Framework

The optimality theory, introduced by Prince and Smolensky (1991), is a linguistic model proposing that the observed forms of language arise from the interaction between conflicting constraints. OT differs from other approaches to phonological analysis, such as autosegmental phonology and linear phonology (SPE), which typically use rules rather than constraints. OT models



languages as systems that provide mappings from inputs to outputs; typically, the inputs are conceived of as underlying representations, and the outputs as their surface realizations and argues that every language ranks a set of constraints in some specific order to give certain constraints prominence and priority over others. Different rankings produce different sets of phonological systems. This way the theory makes use of typologically motivated constraints in language specific ranking to represent the real phonetic outputs of the language. Each phonetic utterance pays the price of a list of universal constraints, but simultaneously reaps the rewards of satisfying the higher ranked constraints. The optimalistic analysis gains its value from its being more logical, benign and restricted than an approach using the classical model. Each constraint is defined and represented by a notation. The constraints are divided into faithfulness constraints and markedness ones. The former looks at the relationship between the input and output, while the latter looks only at the output (Williamson, 2009: 2).

This section continues to describe some faithfulness and markedness constraints involved in elucidation of the above mentioned dialectal vowel changes.

1.2.1 Faithfulness Constraints

Some of the faithfulness constraints applied in this study goes as follows:

IDENT-IO, says that every feature of every segment in the input will be represented in the output, Or as Kager (2006) defines the “Correspondent segments in input and output have identical values” (p. 29). In other words, this constraint says, “Don’t change anything.”

IDENT-V [+stress], says that stressed vowels have identical input and output values for all of their features. In other words, “Don’t change a stressed vowel.”

This specific constraint is a sub-constraint under the more general IDENT-IO. A specific constraint will always be ranked before its corresponding general constraint; otherwise it is redundant and invisible.

IDENT[b,r], penalizes the [+round], [+back] conversion to [-round], [-back].

1.2.2 Markedness Constraints

Some of the markedness constraints applied in this study goes as follows:

*V[-low], says that [-low] vowels are marked and ungrammatical. This reflects the fact that some processes in Persian affect [-low] vowels differently than [+low] vowels. The [-low] vowels are allowed only to avoid violating a higher ranked constraint (e.g. IDENT-IO).

*V[+tense], says that [+tense] (also known as ATR) vowels are marked and ungrammatical. [+tense] vowels are allowed only to avoid violating a higher ranked constraint (e.g. IDENT-IO). All things being equal a vowel will not be [+tense]. These segmental markedness constraints help explain the identity of epenthetic segments and certain alternations.

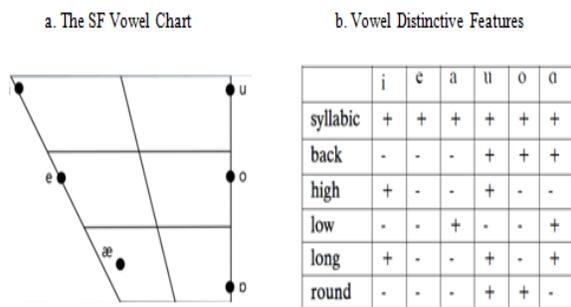
*[u], says that the appearance of [u] is marked and prohibited.

2. Methodology

The study is conducted by a descriptive-analytic method. The data are gathered after 7 hours recording the casual conversations of native speakers of MD including educated/ illiterate, men/ women, between 35 to 65 years of age and transcribing the spoken data afterwards. Besides, the study has taken benefit of using a dialectal report manual written by 5 native speakers (Nezarat, 1391). Neither of the authors of this article were native speakers of MD. Before beginning to describe and analyze the MD vowel alternations exemplars under consideration of the research paper, it seems necessary to take a

brief look at the vowel system of Modern Persian that are illustrated in the following figure 1, as the Modern Persian is considered to be the input forms for dialectal variations unless otherwise noted.

Figure 1: The Vowel Characteristics of Modern Persian (SF)



The following script from Miller (2012) explores the development of the contemporary vowels of Iranian Persian from the early new Persian:

'Since ENP exhibits distinctions that are merged in different ways in other varieties, it is useful to view the ENP vowels as key vowels in a sense derived from Wells's (1982) description of English. For example, Wells (1982) defines several lexical sets, each identified by a keyword, which behave the same way "in respect of the incidence of vowels in different accents" (p.120). So words in the BATH set (consisting of words like bath, path, staff and grass) are generally pronounced with /æ/ in North American English and /ɑ/ in Southern British English, whereas words in the TRAP set (e.g. cat, back, mass) are pronounced with /æ/ in both dialects. Returning to Persian, one can consider a lexical set consisting of words containing ENP ē and consider the transformations these words have undergone in other dialects. Labov (1994) has employed a similar notion called "word classes", in order to facilitate comparison of dialects (p.164–165). Thiesen (1982) developed a vowel notation that enables the reading of

classical Persian poetry with either a classical or a contemporary Iranian Persian pronunciation (p. 9). As we will discuss below, such types of notation will be useful for developing a pandialectal pronunciation dictionary. Following Labov's notation for depicting vowels according to word classes, when comparing the ENP vowels to modern dialects, we place the ENP vowels in bold' (p.158-159).

As for the relative chronology of the changes between ENP and CIP, Windfuhr (1979: 144) states, "many questions actually have hardly been asked yet, such as those concerning the time of, and the conditions for, the lowering of the short high vowels to e, o ..." Pisowicz (1985) has a monumental study in addressing this question, and we provide relevant examples from work cited in his study below. Note that we do not distinguish between long and short vowels in the modern system, since it appears that in contrast to the ENP system, the vowel system is currently based on quality rather than quantity (Lazard, 1957; Toosarvandani, 2004). Lazard (1957) characterizes the vowels derived from the ENP long vowels as "stable" and those derived from the ENP short vowels as "unstable". Compared to the stable vowels, the unstable vowels are more subject to fluctuations in quality and quantity. The description and analysis of the two mentioned vowel change in MD is illustrated in the next section.

2.1 Data Analysis

2.1.1 /i/ to [e] Alternation

The case of substituting a vowel with a more falling one is a vowel alternation process observed in some dialects as a falling process; for instance, a variety of falling processes are reported in different Persian dialects including the alternation of *i* → *e*, *e* → *a*, *u* → *o* and *o* → *ɑ* in Koohbonani dialect (Mahmoodzahi,



1393). Crystal (2008) defined the falling as referring to a movement from relatively high to relatively low (p.211). Since falling actually occurs in a gradable system in Persian (Windfuhr, 1979) this high long vowel turns to the mid high one, as *e* is located between *a* and *i*.

According to Miller (2012) the direction of short vowels shifts between Early New Persian (ENP) and Contemporary Iranian Persian (CIP) is from $i > e$ and $u > o$, result in lowering (p. 162). This is in accordance with Labov's (1994: 116) Principle II: in chain shifts, short vowels fall. The chain aspect here is that the /e/ and /o/ positions are vacant due to the CIP long vowel shifts described above where $\bar{e} > i$ and $\bar{o} > u$. However, two changes involving ENP *a* do not adhere to Principle II. In general, *a* has raised to /æ/ in CIP, while word-finally it has raised even further to /e/ (Perry, 1996: 272-273). Labov (1994) notes that while this principle of short vowels falling applies to most available examples, there are exceptions (p. 116).

Table 1: Persian vowels regarding the height feature

	front	central	back
high	i		u
mid-high		e	
mid		a	ā
			o

The vowel /i/ is one of Old Persians maintained from the Indoeuropean *i* and *e* vowels (Bagheri, 1380). Now consider the following lexical items as instances of the alternation of /i/ to [e] through MD data:

/zir/	→	[zer]	under
/bejir/	→	[bejer]	take
/shirin/	→	[sherin]	sweet
/abrisham/	→	[awreshom]	silk
/?istgah/	→	[?ezga]	station

At a first look, it seems that, according to the above table of distinctive

features of vowels, the vowel /i/ with the features [+High, +Long] changes to [e] with the features [-High, -Long]. It means that the high vowel /i/ has been fallen to the mid vowel [e] in the phonetic representation. On the other hand, as Hendersen (1975) puts it, in SF unstressed vowels are not reduced. But in colloquial variations, all unstressed vowels become lax and unstressed high vowels are not lowered (651-654).

Regarding the faithfulness constraints acting herein, every feature of all segments in the input will be represented in the output, or as Kager claims correspondent segments in input and output have identical values (2006: 29). Accordingly, a sub-constraint IDENT_V [+stressed] under the more general IDENT_IO constraint, works here. Any specific constraint will always be ranked before its corresponding general constraint; otherwise, it is redundant and invisible. However, Williamson (2009) introduces a *V [+tense] constraint that says [+tense] vowels are marked and ungrammatical (p. 3). This reflects the fact that [+tense] vowels are allowed only to avoid violating kind of a higher ranked constraint of IDENT_IO.

Input /zir/	*V[+tense]	IDENT_V	IDENT_IO
'under'		[+stressed]	
1.Zir	*!		
2.Zer		*	*

Since all Farsi phonemes that are [+high] are also [+tense], for MD the IDENT_V [+stressed] is ranked above *V [+tense], thus the rule ordering in tableau (1) protects stressed vowels against any change, including [+tense].

2.1.2 /u/ to [i] Alternation

Abolghasemi (1386) says that the Persian vowel sounds travelling from Middle to Modern Persian bear not much quantitative as well as qualitative changes. However, there observed certain vowel

alternations that are not applied in some dialects and geographical areas and the same vowels of Old Persian happened to transfer and work in these dialectal regions (p. 75).

The /u/ vowel in Old Persian has converted to /i/ in Mashoori dialect under the fronting process and the presence of both variations are reported in Mahshar today. Fronting occurs whenever a vowel with a back or middle articulation place alternations to a fronter place of articulation conditioned to some phonological vs. Anological environment. This process also is reported by Mahmoodzehi (1393) in other Modern Persian languages and dialects such as Baluchi, Kelardasht, Khansari, Anaraki, Pashtu, Abiyaneh, etc (p. 171-185).

In other Persian dialects we see fronting as well. For example Okati et al. (2009) report on ū fronting to [u] and [y] in Iranian Sistani. Miller and Moats (2011) report on data from a Herati (Afghanistan) speaker with a merger between ū and ȳ (p.10, 268) that are realized as [y] as shown in Table 6. LeCoq (1989) mentions other dialects where ū fronting is attested, including unrounding to /i/ in Semnani, e.g. /pil/ ‘money’, and Mazanderani, e.g. /dir/ ‘far’ (p.250). Haig and Opengin (2012) cite Kurdish dialects where the cognate sound of is fronted to [ø:] or [y:] (Shemzinani dialect) and others where it additionally unrounds to [i:] (Badinani in northern Iraq and south-eastern dialects of Kurmanji in Turkey) (p. 13, 42). In apparent contrast to a view whereby fronted variants derived from an original /u/, Bodrogligeti (1961) ascribes to Németh the supposition that ENP u had the quality [y], based on the presence of ü in Persian words borrowed into Turkish (p.267).

The second major vowel alternation exemplar that is currently underway in MD characterized by the plus back, round vowel /u/ changing to minus back, round [i] is as follows:

/pul/ → [pil] money /boluz/ → [boliz] shirt
 /puk/ → [pik] empty /tufan/ → [tifun] storm
 /ru/ → [ri] face /xarsu/ → [xasi] mother in low
 /dur/ → [dir] far /tænur/ → [tændir] oven

According to Green (2007) the reason behind this process arises out of a markedness constraint *[u] that says the output vowel [u] is not permitted. However, there is an IDENT [back, round] faithfulness constraint that penalizes the [+round], [+back] conversion to [-round], [-back], and finally it is the markedness constraint that wins the day.

Input /puk/ 'empty'	*[u]	IDENT[b,r]	IDENT_IO
1.puk	*!		
☞ 2.pik		*	*

Yet, in another research, Jam & Zalaghi (1392) studied a similar vowel alternation in Lori/Silakhori dialect¹, and illustrated different conditions blocking the change (p. 28-38) and decided that it is the context after the vowel [u] that determines the alternation.

3. Conclusion

The vowel alternations in Mahsharian dialect can be explained in terms of OT constraint. Regarding the data presented in this article, MD ranks markedness constraints relatively high. This is in line with Williamson (2009) in that dialectal variations take the most liberty in moving specific markedness constraints to be more prominent than some other faithfulness ones (p.9). However, the positional constraints would outrank the markedness constraints. Therefore, in all cases of instances of disallowed change of /u/ to [e], neglected here, the relevant

¹. a variant of Lori dialect in Lorestan Province



positional constraints would take the priority over the *[u] markedness constraint. In sum, the ranking hierarchy for Mashoori dialect regarding the two alternation discussed is as *V[+tense], *[u] >> IDENT_V [+stressed], IDENT[b,r], IDENT_IO.

In sum, this study was an attempt to show the utility of the sound alterations in understanding the variation among the vowel systems of several diachronically and synchronically separated varieties of Persian which are derived from it. The present dialectal vowel change study provides a somehow dynamic picture of Persian vowels in a number of distinct varieties.

We suggest future attempts to try to form dialectal pronunciation dictionaries and moreover, to conduct dialectal acoustic study to shed light on the exact quality of vowels in dialectal variation that helps a lot in phonetic and phonologic study of dialects.

References

- Abolghasemi, M. (1386). *The History of Persian Language*, SAMT Publication, Iran, Tehran.
- Bagheri, M. (1380). *An Introduction to Linguistics*, Ghatreh Publication, Iran, Tehran.
- Bodrogligeti, A. (1961). "The Persian Translation of the Koran in Latin Letters." *Acta Orientalia Academiae Scientiarum Hungaricae*, 13: 261–276.
- Crystal, D. (2008). *A Dictionary of Linguistics and Phonetics*, BlackWell Publication.
- Green, A. D. (2007). *Phonology limited*, Potsdam: universitätsverlag Potsdam.
- Haige, G., Opengin, E. (2012). "Kurmanji Kurdish in Turkey: Structure, Varieties and Status" (unpublished manuscript).
- Henderson, M. M. T. (1975). Diglossia in Kabul Persian Phonology. *JAOS*, 95: 651–654.
- Jem, B. & Zalghi, A. (1392). *The Optimal Analysis of /u/ to [e] in Silakhori/Lori Based on Optimality Theory*, Pazhuheshhaye Zabani, 4:2.
- Kager, Rene. 1999. *Optimality Theory*. Cambridge Textbooks in Linguistics. Cambridge: Cambridge University Press.
- Keshavarz, K. (1358). *An Introduction to Iranian Philology*, Payam Publication, Iran, Tehran.
- Lazard, Gilbert (1957). *Grammaire du Persan Contemporain*. Paris: Klincksieck.
- LeCoq, Pierre (1989). "Le classement des langues irano-aryennes occidentales." In: de Fouchécour, C. H. & Gignoux, P. (eds), *Études irano-aryennes offertes à Gilbert Lazard* [Studia Iranica Cahier 7]. Paris: Association pour l'avancement des études iraniennes, pp. 247–26
- Mahmoodzahi, M. (1393). A case of Vowel Fronting in historical research of Baluchi Language, *Zaban Shenakht*, 5:1, 171-185.
- Miller, C. (2012). Variation in Persian Vowel System, *Orientalia Suecana LXI*, found at <http://www.diva-portal.org/smash/get/diva2:657365/FULLTEXT01.pdf>
- Miller, C. & Moats, N. (2011). "Convergence on [u] across Persian Dialects." Poster presented at International Conference on Iranian Linguistics 4, Uppsala, Sweden.
- Vardanjani, A. & Veisi, E. (2015). Exploring the /w/, /v/, /b/ and /f/ Alternations in Mashoori Dialect (MD) Of Persian Language. *International Journal of English Language & Translation Studies*. 3(2), 133-139.
- Nezarat, N. (1391). [Vocabularies and the idiomatic expressions of Mahshahr, Hendijan and vicinity.](http://www.parsbook.org) <http://www.parsbook.org>.
- Okati, F. , Ahangar, A. A. & Jahani, C. (2009). "Fronting of /u/ in Iranian Sistani. *Orientalia Suecana* , 58, pp. 120–131.

- Pisowicz, A. (1985). *Origins of the New and Middle Persian Phonological Systems*. Krakow: Jagiel-Ionian University.
- Prince, A. & Smolensky, P. (1991). "Optimality," paper given at Arizona Phonology Conference.
- Toosarvandani, M. D. (2004). "Vowel Length in Modern Farsi." *Royal Asiatic Society, Third Series* 14(3), pp. 241–251.
- Williamson, P. (2009). *Phonological Variations in Kabul Persian: An Optimality Theory Analysis*, *Occasional Papers in Applied Linguistics*, 4, 1-10.
- Windfuhr, G. L. (1979). *Persian Grammar*. The Hague. Mouton.