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## Relative Chronology of Sound Changes in Iranian Languages

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## Abstract

Relative chronology in historical linguistics refers to temporal order of sound changes affecting a language. Because a sound change is restricted to a particular period of time in the history of the language in which it takes place, this enables us to solve apparent problems with which we sometimes are confronted. This means that some sound changes may take place in the language at some earlier stage, whereas others may take place at some later stage in the history of that language. Often in the case of different changes from different times, evidence is left behind which provides us with the clues with which we determine their relative chronology, that is, the temporal order in which they took place. Therefore, part of working out the phonological history of a language is determining the relative chronology of the sound changes which have affected the language.

In Iranian languages also, there are some cases where the different temporal order of sound changes has an important role in the process of sound changes. In cases where we find morphophonemic variation in development of words, the order may be affected by difference in temporal order of sound changes. In this paper, after an introduction to relative chronology and its special use in historical linguistics, by examining the chronological order of sound change in development of some words in Iranian languages, it will be shown that how and why relative chronology can solve some problems with which we sometimes are confronted in working out the sound changes of a language.

In the history of Baxtiari, we find the change of Middle Persian  $\bar{a}mad$ - "to go" to  $\bar{a}ve\delta$ - (then  $awe\delta$ -) in Kuhrang variety and ovay- in Iza variety. In this case, Baxtiari underwent two changes: A.  $\bar{a} \rightarrow o / - m$ , and B.  $m \rightarrow v / V - V$ . In Iza variety, the change took place in the order A $\rightarrow$ B, but in Kuhrang variety first the B change has been applied, and the use of B change has eliminated the phonetic environment for sound law A, since B had taken place first, then, there would have been no remaining *m* to condition change A. Another example of affecting relative chronology is seen in Middle Persian \**mista* to *mīsa* and *mēsa* "urine" in some varieties of Boirahmadi, where among the two change A: Vst  $\rightarrow \nabla s$ , and B:  $i \rightarrow e$ , the order B  $\rightarrow$ A has resulted to *mēsa*, while *mīsa* is developed by only B, because change A has eliminated the condition for change B. The same thing has occurred for Middle Per-

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sian  $br\bar{u}g$  "eyebrow" to Persian  $abr\bar{u}/bor\bar{u}$ , where final postvocalic -g is deleted, while in Lori *borg* "eyebrow" by metathesis of r the word retained its g because it was not word-final. One more example is development of Old Iranian \**wafra*- to *var* "snow" in Tati and Semnani, where the f is deleted before r, but the metathesis of r with f in some Iranian languages such as Persian, Lori and Meymai have changed the condition for deletion of f, and we find this word as *barf* and *warf* in these varieties where the f is retained.

Most Central dialects have  $p\ddot{u}r$  "son" and  $s\ddot{u}r$  "red" developed from Old Iranian " $pu\theta ra$ - and "suxra-, respectively. The compensatory lengthening of u has resulted in " $p\bar{u}r$  and "s $\bar{u}r$ , then, through general change of Old Iranian  $\bar{u}$  to Central dialects  $\ddot{u}$ , the forms  $p\ddot{u}r$  and  $s\ddot{u}r$  are developed. Here the compensatory lengthening of u, provides the necessary condition for fronting of  $\bar{u}$  to  $\ddot{u}$ . The same change has occurred for development of  $n\alpha 2l$  "horseshoe" to na:l in Lori which deletion of 2 and compensatory lengthening of  $\alpha$  has resulted in the development of form  $n\alpha:l$ , then, by general rising of  $\alpha$ : to a:, the form na:l is formed. Again, compensatory lengthening has provided the necessary condition for rising of the long vowel in this word. The words such as *etmi:na:n* "confidence" and *i:ma:n* "faith" in Persian have been developed in the same way from their proto-forms *itmi?na:n* and *i?ma:n*.

All the examples show that determining the relative chronology of the sound changes has an important effect in process of words development, and considering it can solve some problems with which we sometimes are confronted. We see that applying a sound change can eliminate the condition for another sound change and prevent its occurrence. While some other changes may provide a condition for a secondary change that affected the word. Different chronological order of sound can also be a reason for developing different dialects of a language, where a particular sound change order may distinguish a variety from other dialects which underwent another order of sound changes.

**Keywords:** relative chronology, Iranian languages, sound change, historical linguistics