

The Investigation of Lenition in Generative Phonology in Sistani Dialect

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ABSTRACT

The purpose of this article is to investigate lenition in Sistani dialect in generative phonology frame. At first the short description of Sistani dialect, Methodology and generative phonology is represented, and then the phonological process lenition in Sistani in comparison with Persian is dealt with. For this purpose, all alternation in respect of lenition, in Sistani in comparison with Persian, were extracted then according to some criteria, it is determined which form is underlying representation; for instance, in Sistani, bilabial consonant such as [b] in the coda position of syllable is converted to [f],[v],[w]. like ab → ow. According to "Frequency of occurrence, it is proved/ab is underlying representation.

Keywords: Lenition, generative phonology, sistani dialect of zabol, Persian.

INTRODUCTION

Sistani Dialect is member of western Iranian group of languages that is spoken in Sistanas well as Sarakhs in khorasan, Zahedan, Golestan province of Iran, South of Turkmenistan, parts of Afghanistan such as Nimrooz and Fara and Baluchestan Province in Pakistan (Yarshater, 1985:348-365).

The Iranian sistani dialect is spoken by 90% of a total of about 350000 inhabitants in the sistani region of the province of Sistan and Baluchestan. It is spoken in other parts of Iran such as Sarakhs in khorasan, Zahedan, The Golestan province and Pakistani Baluchestan (dusti, 2000:16). The Sistani dialect is spoken in the central region (although the sistani of Zabol is under influence from standard Persian but there is phonological differences between them. The purpose of this article is to investigate two phonological processes (lenition and prothesis) in generative phonology frame in Sistani at Zabol in comparison with Persian (Ahangar, 2003:4).

METHODOLOGY

In this paper, the corpus of the investigation is gathered in field and direct method. The selected statistical community in this research included 20 informants from Sistani region in 18 to 60 old groups and in male and female sexes. They were native speakers of the dialect under the study. The sampling method was also done in an interview form. It is also based on using questionnaire and recording sound on a digital recorder set. After collecting data, in order to discover underlying representation, the following work was done:

- 1- Exact investigation of narrow phonetic transcription
- 2- Recognizing distinguishing rule-governed phonetic changes from non-rule-governed changes
- 3- Discovering morphological, phonetic and feature alternation
- 4- Achieving to UR by making hypothesis on rely on alternation
- 5- Representing the confirmed hypothesis by rule in order to show relation between UR and PR.

THEORY

This article analyzes lenition in Sistani dialect within the framework of Standard Generative Phonology Theory. Here is a brief review of generative phonology and its principles, as we are all familiar with it.

The set of feature that is most widely used at the present time in describing phonetic segments and in writing phonological rules is the set put forth by Chomsky and Halle for the first time in 1968, in *The Sound Pattern of English* (SPE) or slightly modified version of that set (Edwards et al, 1983: 60). In the SPE system the articulatory features are viewed as basically binary, that is, as having one of two values: either a plus value(+), which indicates the presence of the feature, or a minus value(-), which indicates the absence of the feature (Akmajian et al, 2010:114). In fact Generative phonology is a component of generative grammar that assigns the correct phonetic representations to utterances in such a way that reflects a native speaker's internalized grammar. The followings are crucial components of generative phonology:

-Levels of phonological representation

“Generative phonology includes two levels of phonological representation:

An underlying representation which is the most basic form of a word before any phonological rules have been applied to it. Underlying representations show what a native speaker knows about the abstract underlying phonology of the language. A phonetic representation is the form of a word that is spoken and heard. Phonological rules map underlying representations onto phonological representations. They delete, insert, or change segments, or the features of segments; for instance, assimilation, dissimilation, prosthesis, lenition, etc” (Kenstowicz, 1994:35). Distinctive features make it possible to capture the generalities of phonological rules. Linearity is a stream of speech is portrayed as a sequence of discrete sound segments. Each segment is composed of simultaneously occurring feature.

“Six criteria for identifying and determining UR:

1. *Universal tendencies*: if we don't know which one of two feature in alternation, $[\alpha] = [\beta]$, is UR, we can refer to other language, if $[\alpha]$ is seen independently alone in another language, but $[\beta]$ is not observed alone in other language, in other word, its presentation is dependent to $[\alpha]$, in this condition $[\alpha]$ is UR.
2. *Frequency of occurrence* (distribution): from two feature in alternation, $[\alpha] = [\beta]$, the feature which has complete distribution is UR.
3. *Phonetic plausibility*: from two feature in alternation, $[\alpha] = [\beta]$, the feature which its conversion to another one has phonetic explanation is UR. In other words it should have rule-governed context.
4. *Phonological naturalness*: from two feature in alternation, $[\alpha] = [\beta]$, the feature which its conversion to another one is so common in other language is UR. For example: nasalization.
5. *Phonological predictability*: This criteria is particular to paradigm used in morphology. For example, in comparing singular and plural noun in different language, sometimes there are some gaps in paradigm. Two feature, $[\alpha]$ & $[\beta]$, in some paradigm are in alternation and in remainder are not, and for instance, $[\alpha]$, for both singular and plural nouns, is appeared, in this condition the feature in alternation, $[\beta]$, is UR.

6. *Naturalness or plausibility*: Whenever in collected data, $[\alpha]$ is observed in A context and $[\beta]$ is observed in B context, in this condition only one of two rule ($\alpha \rightarrow \beta$ or $\beta \rightarrow \alpha$) is applied; in this case, that rule is applied which has more phonetic naturalness or plausibility” (Kambuzia, 2006:30-100).

The relation between UR and PR is shown below:

| | | |
|-------|---------------|------|
| UR | / # # / | |
| ----- | | |
| | # # | R1 |
| | # # | |
| | # # | Rn |
| ----- | | |
| PR | [.....] | |

-Lenition

There are three kind of stricture or obstruction in phonetics: approximate, continuant, stop.

“Sound changes from left to right on the stop, fricative, approximate dimension are known as weakening (lenition) while changes from right to left are strengthen (fortition)” (kenstowicz: 1994: 35).

DATA ANALYSIS

Converting [b] to [w]

In following data, in coda position of syllable, labial consonants [b],[f],[v] are converted to glide consonant [w].

Table1. Converting b → w insistani

| <i>sistani</i> | <i>persian</i> | <i>English</i> |
|----------------|----------------|----------------|
| ow | ab | water |
| tow | tab | swing |
| a:ftow | aftab | sunlight |
| emfow | emfab | tonight |
| fowgi:r | fabgir | nocturnal |
| ma:tow | mahtab | moonlight |
| marqowvi | morqabi | duck |
| fow | fob | wood |
| sowz | sabz | green |

Table2. Converting f & v → w in sistani

| <i>Sistani</i> | <i>Persian</i> | <i>English</i> |
|----------------|----------------|---------------------|
| gow | gav | cow |
| dowtla:b | davtala:b | voluntary |
| go:fowkanaja | guʃe-vo-kenaje | Sarcastic remark |
| owqonasto: | afqanestan | Afghanistan |
| owqo: | afqan | afghan |
| drowʃ | derafʃ | banner |
| owsar | afsar | bridle |
| kowʃ | kafʃ | shoes |

According to mentioned data, there is phonological alternation between [b],[f],[v]~[w]. For determining underlying representation (UR), we can consider two hypotheses:

First hypothesis: existing words in Sistani are UR, in other word, [w] in coda position or when appeared after vowel is converted to labial consonants [v], [f], and [b].

Second hypothesis: existing words in Persian are UR, in other word, labial consonants. [v], [f], [b] in coda position or when appeared after vowel is converted to [w].

According to "Frequency of occurrence(distribution)", the form which has complete distribution is underlying representation. In Sistani dialect, the consonants [f], [b],[v] are appeared in onset and coda position of syllable so that have complete distribution while glide[w] is never appeared in onset position, as well as, we cannot represent any rule to show in which context [w] is converted to[b], [v] or [f] or not. So we can say the existing words in Persian are UR. Moreover, phonological changes in mentioned data are occurred in code position of syllable and in the position after vowel which both position are prominent position for lenition in which phonetic obstruent become open,so a plosive consonant is converted to glide or continental consonant. According to "Phonetic plausibility" this conversion is so acceptable process in lenition. The rule of this phonological process is shown as following:

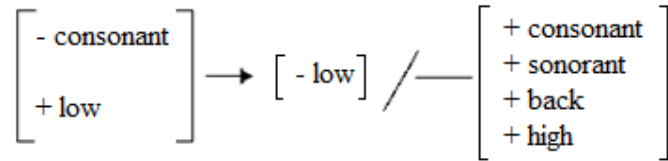
$$\{b, f, v \rightarrow w / \left\{ \begin{array}{l} \text{v} \text{ —} \\ | \\ [\text{-consonant}] \\ \text{— v —} \\ | \\ [\text{-consonant}] \end{array} \right.$$

$$\left[\begin{array}{l} + \text{consonant} \\ + \text{labial} \\ - \text{nasal} \\ + \text{voice} \end{array} \right] \rightarrow [+ \text{sonorant}] / \left\{ \begin{array}{l} [\text{-consonant}] \text{ —} \\ [\text{-consonant}] \text{ —} [\text{-consonant}] \end{array} \right.$$

This rule shows how labial consonant[b], [v] or [f] are converted to[w]. Moreover, in these data, the low vowel[a], [a] are converted to middle vowel[o], this process is called "raising

vowel”. In fact, the vowel is assimilated with three features [+back, +round, +high] of a created glide. This rule is represented below:

{a& a → {o/— w



So, the low vowel in the preceding position of glide [w] is converted to non-low vowel.

Table3. Converting b→f&v in sistani

| <i>Sistani</i> | <i>Persian</i> | <i>English</i> |
|----------------|----------------|------------------|
| ʃafta:l | ʃabdār | clover |
| kafta:r | kabutar | pigeon |
| var | bar | on |
| var | baraje | for |
| va | be | to |
| avi: | abi | blue |
| ʃorva | ʃurba | pottage |
| va | baz | again |
| vazo:r | bezur | forcely |
| va:r-dar | bar-dar | take |
| tava | tabe | Frying-pan |
| zvo: | zaban | Language- tongue |
| var-ʃe | baraj-e-ʃe | For what |
| pasa-vo: | pas-e-ban | watchman |
| baqa-vo: | baG-e-ban | gardener |
| daft-vo | daft-e-ban | Field watchman |
| tva:r | tabar | axe |

Converting of G→x

In Sistani dialect, the voiced plosive consonant[G], in the position between vowels or under influence of nextvoiceless consonant, is converted to voiceless continental consonant[x].

Table4. Converting q → x in sistani

| <i>Sistani</i> | <i>Persian</i> | <i>English</i> |
|----------------|----------------|----------------|
| boʃʌb | boʃʌb | plate |
| exʃ/ eʃx | eʃʒ | love |
| na:ʃx/ na:xʃ | naqʃ | role |
| alx | halʒ | pharynx |
| ra:xs | raʒs | dance |
| ma:xʃ | maʃʒ | homework |
| noxta | noʒte | Point-dot |
| tasxir | taʒsir | Fault-guilt |
| va:xt | vaʒt | time |
| bowxi | baʒi | remainder |

According to mentioned data, there is phonological alternation between [ʒ] ~[x]. For determining underlying representation (UR), we can consider two hypothesis:

First hypothesis: existing words in Sistani are UR, in other word, voiceless velar fricative consonant [x] in coda position is converted to voiced velar stop consonant[ʒ].

Second hypothesis: existing words in Persian are UR, in other word, voiced velar stop consonant[ʒ] in coda is converted to , voiceless velar fricative consonant [x].

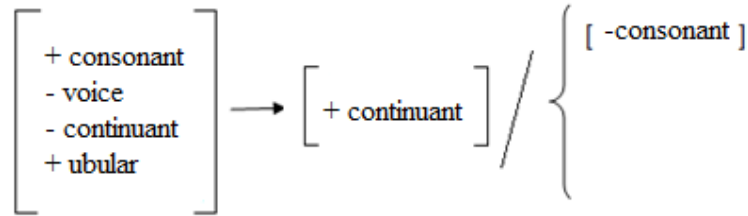
According to Phonetic plausibility, the feature which its conversion to another one has phonetic explanation is UR. In many mentioned data, [ʒ] in the vicinity of voiceless consonant is assimilated and converted to [x], assimilation is so common than dissimilation, as well as, voiced consonant in coda position, because of existing pause after it, tends to become voiceless. Moreover, according to Phonological naturalness, from two feature in alternation, the feature which its conversion to another one is so common in other language is UR. In many dialect of Persian, for instance, in Taleshi, conversion of [ʒ] to [x] in coda position is so popular.

In these data, in Sistani dialect, [ʒ] in the vicinity of voiceless consonant such as [ʃ],[ʃʃ],[s]& [t] is converted to [x]. This process is sometimes occurred without vicinity to voiceless consonant.

Table5. Converting ʒ → x in sistani

| <i>Sistani</i> | <i>Persian</i> | <i>English</i> |
|----------------|----------------|----------------|
| vaxm | vaʒf | pious |
| axan | jaʒe | collar |

This conversion is also a kind of lenition process. It is occurred context between or after a vowel or before voiceless consonant. This rule is shown below:



CONCLUSION

The purpose of generative grammar is to create simplest grammar for language. In generative phonology, simplicity is equal to number of necessary feature to echo phonological rule(phonological generalization). Whatever the number of necessary feature be less, the analysis is simpler and with higher value. Lenition is generative process in Sistani. The results show two common lenition process in Sistani dialect are:

In coda position of syllable, labial consonants [b], [f], [v] are converted to glide consonant [w]. Such as:

wood $\text{ʃob} \rightarrow \text{ʃow}$

cow $\text{gav} \rightarrow \text{gow}$

Afgan $\text{afqan} \rightarrow \text{owqo}$:

Bilabial plosive consonants [b] between two vowels are altered to labia-dental continental consonant [f], [v]. Such as:

kafta:r \rightarrow kabutar

The voiced plosive consonant /G/, in the position between vowels or under influence of next voiceless consonant, is converted to voiceless continental consonant /x/. Such as:

boxfab \rightarrow boʃGab

By use of some criteria for determining UR, it is improved the feature existing in Persian is underlying representation.

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