A Morpho-phonological Analysis of Vowel Changes in Takestani-Tati Verb Conjugations: Assimilation, Deletion, and Vowel Harmony

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Abstract

The Tati language is one of the most traditional Northwestern Iranian languages in the Indo-European language family. Tati has been categorized by UNESCO's "Atlas of the World's Languages in Danger" project as a "definitely endangered language." Tati and Persian are in the same language family called "Western Iranian" languages. Although the Persian language has attracted a lot of attention from linguists worldwide, the morphological and phonological structures of Tati (and their possible interactions) are still un(der)described. This provides unique opportunity for the world's linguists to study its grammatical system.

The Takestani dialect, which is spoken in the city of Takestan near the city of Qazvin, was the dialect of interest in this study: a morpho-phonological analysis of Tati verbs was done to determine how the verbs' vowels manifest in surface forms, and how they are different from the underlying forms identified for each. the internal structure (of the verbs) mapped in the study include these essential parts: The essential parts of each verb include (a) a preverb the vowel of which assimilates in many cases to the stem vowel in each verb. The preverb in each verb is either a single vowel chosen out of a limited set of vowels, or a vowel following the consonant /b/ or /m/ as bolded in *[**v**-ˈχvr-iɛ]* meaning ' [subjunctive] she drinks…' and in *[**bi**-ˈnist-em]* meaning 'I wrote' (b) the stem as the essence of the verb which follows the preverb and has either past or present tense as bolded in the same verbs *[v-ˈ**χvr**-iɛ]* and *[bi-ˈ**nist**-em]* successively as present and past stems, and (c) a personal suffix following the stem which conjugates for person, number, and gender in most verbs as bolded in *[v-ˈχvr-**iɛ**]* and *[bi-ˈnist-**em**]* successively as 3rd person feminine singular and 1st person singular suffixes. Besides, the underlying forms for some other verbal morphemes intervening into the essential verbal morphemes (e.g. negative morphemes */ne-/* and */ma-/*, inchoative morphemes */i-ast-/*, causative morpheme */-en /* and past participle morpheme */-a/* were mapped; and vowel changes in verbs were charted with regards to their type, trigger, ordering, scope, and directionality of vowel changes.

The study showed that there are two types of vowel changes in Tati verbs; one change, which is related to the preverb vowels, is probably assimilatory in nature from a historical point of view. In other words, in each verb the preverb vowel assimilated to the verb stem vowel. An example is the underlying form */be-ˈɢost-em/*, meaning 'I wanted…' which manifests as *[bo-ˈɢost-em]* in surface under the influence of the assimilation rule. Although there are some verbs in which the preverbs vowels seem to have carried the

result of such phonological change into their current forms, a lot of irregularities are found now in the preverb vowels of the verbs in Tati which probably trace back to further historical changes afterwards. An example is the verb *[ˈba-ʃon-em]*, meaning '[subjunctive] I hear…', in which the preverb vowel does not show the mentioned assimilatory change from the underlying form /be-/ into *[bo-]* as it is expected and hence the verb does not show up as **[ˈbo-ʃon-em]* in surface.

This study also revealed more regular and systematic vowel changes in verbs which go beyond diachronic assimilation. These vowel changes are either deletion or harmony in nature and they are extendable to almost all verb conjugations satisfying certain contexts needed for the related phonological rules. An example for vowel deletion is in the verb */be-irbind-em/* meaning 'I cut…', in which the vowel in the underlying form of the preverb */be-/* deletes preceding another vowel in the stem and hence it changes into *[bi-rˈbind-em]* in surface form. Moreover, two main groups of vowel harmony were found in verb conjugations which include two types of rounding and three types of raising.

The rounding rules include: (1) e→o /_C0 o or _C0 u, and (2) e→ œ/ _C0 œ or C0 œ_. Examples for rounding include (a) the underlying form */o-ne-gor-em/* meaning 'I don't take…', showing up as *[o-ˈno-gor-em]* under the influence of the rounding rule (1) and, (b) the underlying form */me-kœʃ-i/* meaning 'you kill…', showing up as *[mœ-kœʃ-ˈi]* in surface under the influence of the rounding rule (2).

The raising rules include: (3) e→i /_ C0 i, (4) a→ɛ /_C0V0 i, and (5) o→u /_C0 i. Examples for raising include (a) the underlying form /a-ger-i/ meaning '[subjunctive] you buy…', showing up as [ˈa-gir-i] under the influence of the raising rule (3), (b) the underlying form */ɒ-pard-i/* meaning 'you won…', manifesting as *[ɒ-ˈpɛrd-i]* in surface under the influence of the raising rule (4), and (c) the underlying form */o-ne-gor-i/* meaning 'you don't take…', showing up as *[o-ˈno-gor-i]* in surface under the influence of the rounding rule (1) and then showing up as *[u-ˈnu-gur-i]* in some speakers' speech under the influence of the raising rule (5). Moreover, the interaction between the rules and their ordering as it was shown in the latter example, their scope of application, and their directionality were dealt with using several other examples, too. In future research, Optimality Theory (OT) will be applied to the data analysis results in this study.

References

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