

Using Phasal Syntax to Make Generalizations in Manchu Vowel Harmony

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Introduction: Manchu is a nearly extinct agglutinating Tungusic language spoken in the People’s Republic of China. Unlike the relatively straightforward vowel harmony of its neighbors, such as Mongolian, Manchu vowel harmony is often considered highly irregular, particularly with respect to the imperfective participial suffix, which often contradicts the expected vowel harmonic rules (von Möllendorff 1892:10-11, Ji et al. 1986:86, Gorelova et al. 2002:96). With the population of native speakers decreasing, the ability for heritage learners to internalize complex systems effectively and efficiently is advantageous to the continued usage of Manchu among younger speakers. In this paper, we analyze Manchu vowel harmony and argue that much of what were previously considered irregularities can actually be explained as the result of a phasal imperfective head, which requires that its complement, the spell-out domain, be sent to PF before more material can attach to the stem, similar to Fenger (2020)’s analysis of stress and pitch accent in Turkish and Japanese verbs respectively. We suggest that this analysis, which provides regularity where there was previously assumed to be none, can be used in pedagogy as a way of streamlining the internalization process of acquiring vowel harmony. Vowel harmony data is collected from several texts, including novels, poetry, and political and historical documents ranging from 1623 to 1913.

Vowel Harmony: Manchu has both Labial and ATR harmony, with Labial harmony only applying when two /ɔ/ triggers are present in a stem. For harmonic purposes, vowels /a/ and /ɔ/ are considered [–ATR], /ə/ is considered [+ATR], and /i/ and /u/ are considered neutral. Vowel harmony affects uvular and velar consonants as well, with velars being [+ATR] analogues of [–ATR] uvulars. For typical cases, suffixes which only contain neutral vowels are transparent to ATR harmony. Suffixes which are not already specified for ATR agree with the last non-neutral vowel. Stems which only consist of neutral vowels have an arbitrary ATR value associated with them; for instance, the root /tutɕi/ ‘to come out’ triggers [+ATR] harmony while /ili/ ‘to stand’ triggers [–ATR] harmony (Ard 1984). This can be seen in (2), where the perfective ending /HA/ ([χa/xə/χɔ]) acts as a representative of most affixes.

	Perfective	Caus. Perfective	Imperfective	Caus. Imperfective
/ta/ ‘to be caught’	[ta-χa]	[ta-bu-χa]	[ta-ra]	[ta-bu-rə]
/te/ ‘to live (somewhere)’	[tə-xə]	[tə-bu-xə]	[tə-rə]	[tə-bu-rə]
(1) /tɔqtɔ/ ‘to be fixed’	[tɔqtɔ-χɔ]	[tɔqtɔ-bu-χa]	[tɔqtɔ-rɔ]	[tɔqtɔ-bu-rə]
/tutɕi/ ‘to come out’	[tutɕi-kə]	[tutɕi-bu-kə]	[tutɕi-rə]	[tutɕi-bu-rə]
/ili/ ‘to stand’	[ili-χa]	[ili-bu-χa]	[ili-rə]	[ili-bu-rə]
/Gasχu/ ‘to take an oath’	[Gasχu-χa]	[Gasχu-bu-χa]	[Gasχu-rə]	[Gasχu-bu-rə]

As seen in the fourth and fifth column of (2), however, imperfectives act differently from other suffixes. Namely, the [–ATR] triggering stems which end in a neutral vowel, either as part of the root or due to the addition of affixes like the causative are followed by the [+ATR] form. Thus, neutral vowels are treated as [+ATR] before the imperfective participle. This change in harmony extends after the imperfective, affecting subsequent suffixes, such as the relativizing suffix in (3b).

- (2) a. /jabu-HA/ > [jabu-χa] (walk-PFV, ‘having walked’)
b. /jabu-rA-lA/ > [jabu-rə-lə] (walk-IPFV-REL, ‘which one walks (to)’)

Analysis: A similar phenomenon can be seen in Japanese pitch accent and Turkish stress, whereby the addition of the progressive aspect in both languages forces the phonological domain related to their respective phenomena to ‘close’. Fenger (2020) argues that the progressive head acts as a phase head, and so when a progressive head is reached in a derivation, the pitch accent and stress assignment must be sent to PF and realized before the derivation can continue. As a result, while pitch accent in the Japanese *hèdátárérèrù* (4a) seems regular, with a pitch accent (co-occurring with a lowering of pitch) appearing on the last mora of the word, the progressive head in *hèdátátèrù* (4b) forces an early downstep as the spell-out domain contains the stem up to the progressive head but not the present tense head.

For Manchu, we argue that neutral vowels may be underlyingly specified (positive or negative) for ATR in roots and underspecified in suffixes. The specification in stems affects ATR harmony, but is neutralized in pronunciation, similar to palatalization in Iñupiaq (Kaplan 1981:31). For non-imperfective

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| <p>(3) a. (hèdátá -ráré -rù)
be.distant -PASS -PRS</p> <p>b. ((hèdátá -tè) -rù)
be.distant -PROG -PRS
[Japanese, Fenger 2020:28 (38)]</p> | <p>(4) a. (ala -bu -χa -la)
report -CAUS -PFV -REL</p> <p>b. ((ala -bu) -rə -lə)
report -CAUS -IPFV -REL
[Manchu]</p> |
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verbs, neutral vowels are thus completely transparent (5a). The imperfective head is a phase head not contained in the spell-out domain. When it is reached in the derivation of a word, the stem preceding the imperfective is sent to PF, requiring that the unspecified /I/ and /U/ be realized with a specified [ATR] value; as a result of a filter preventing [+HI, –ATR] vowels, which neutralizes high vowel ATR distinctions in roots, they are realized as [i] and [u]. Following this, the rest of the derivation continues, but previously ‘neutral’ vowels in the spell out domain are specified [+ATR], and thus opaque. Thus, stems ending in high vowels are treated as [+ATR] for the imperfective and any following suffix (5b). This is even true of the marginal [+HI, –ATR] [ʊ], an allophone of [u] after uvular consonants, which also triggers [+ATR] harmony in the imperfective, seen with /gasχʊ/ in (2). We explain the [–ATR] feature of [ʊ] as the result of phonetic lowering after uvulars as seen in languages like Quechua (Gallagher 2016).

Applications in Revitalization: The traditional approach to teaching vowel harmony, the ‘yin-yang’ method (Ji et al. 1986) designates three vowel harmonic classes, ‘yin’ (/ə/) , ‘yang’ (/a/, /u/, and /ɔ/), and ‘neutral’ (/u/ and /i/). Suffixes which undergo synharmony are taught to agree in vowel class with the last non-neutral vowel in the stem, with the addition of labial harmony imposed on suffixes attached to stems with a final /ɔ/. For ‘neutral’ class suffixes, /u/ is the ‘yin’ counterpart of /u/. Anything which does not conform to this rule is taught as an irregularity. Our analysis allows for greater generalizations of vowel harmony in Manchu and may provide heritage learners and teachers who have previous linguistic knowledge, those which Gerdts (2017) calls ‘indigenous linguists’, with a method of streamlining the pedagogical process of teaching and learning vowel harmony by lessening the demand on students to memorize irregular forms. We include in our paper our discussions with several Manchu language teachers on the discrepancy between the ‘yin-yang’ method and the generalizations which our theory forms, and potential ways of integrating these into Manchu language curricula. We also suggest that this theory of Manchu harmony may be able to provide reconstructions for inflections of stems which do not have fully recorded inflectional paradigms, as well as for developing the inflections of newly coined words.

Conclusion: The benefit of abstract analyses is that the regularities which native speakers unconsciously internalize may be made explicit. Directly applying linguistic theory to pedagogy may result in confusion among learners, who may find theoretical explanations difficult to internalize. By providing an abstract analysis and working in conjunction with indigenous linguists in order to create native- and heritage-speaker lead pedagogies, we aim to make Manchu not only more understood theoretically, but also more accessible to heritage learners.

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