

Does Aymara Have Subtractive Case Morphology?



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1. Motivation

- Direct objects in Aymara (Jaqian, spoken in the Lake Titicaca region, primarily in Bolivia & Peru) generally undergo final vowel deletion.
- Past descriptions (e.g. Hardman 2001, Coler 2014) have characterized this process as the means of marking **accusative case**.
- It follows from such an analysis that case-marking is achieved by **subtractive morphology**.
- Our claim: it's phonology fed by syntax, not morphology proper.
 - Putative accusative case-marking is an instance of the more general process of "vowel suppression" (term due to Coler 2014).
 - The verb phrase is one of the syntactic / prosodic domains of application for vowel suppression. This is paralleled elsewhere, e.g. the noun (determiner) phrase.
 - Vowel suppression may be undone in prosodically marked contexts (see Sec. 5, 6).

2. Data Collection & Method

- Primary data come from elicitation with one native speaker born near Puno, Peru, who has resided in the Bay Area of CA for several years.
- Additional data from published narrative texts (Albó & Layme 1992), and from Coler (2014)'s grammar of the Muylaq' dialect.

3. Background: Direct Objects & "Accusative Case"

- (1) and (2) show final vowel suppression of their direct objects (*qala* & *khuchhi*, resp.) under unmarked phrasing. Examples herein show deleted vowels in parentheses beneath surface forms.

(1) *Qal jaqt'awaytxa*
qal(a) jaq-t'a-way(a)-t(a)-xa
rock kick-INST-DIST-1SIM-TOP
'I kicked the rock.' (STL-KPB_20141103)

(2) *Jupax khuchh phayaskex*
jupa-x(a) khuchh(i) phaya-ski-x(a)
3SG-TOP pig cook-PROG-TOP
'She's cooking the pig.' (STL-KPB_20150414)

4. Evidence I: Phrase-internal Vowel Suppression

- Final vowel deletion between words is more pervasive than the accusative case analysis might otherwise lead us to expect. (3) and (4) show suppression inside nominal expressions.

Adjective + Noun	Noun + Noun
(3) <i>ch'iyar kamisa</i> ch'iyar(a) kamisa black shirt 'black shirt' (Coler 2014: 186)	(4) <i>apill ch'uriri</i> apill(a) ch'ur(a)-iri tuber give-AG 'tuber giver' (NRR_20150217)

- (5) and (6) show suppression on adverbials that immediately precede the verb, including the negation marking *jani*, indicating a lack of morphosyntactic selectivity:

Negation + Verb

(5) *Jan manq'antawayasitati*
jan(i) manq'a-nta-waya-si-(i)ta-ti
NEG eat-IW-DIST-REFL-2>1IMP-IRR
'Please don't bite me.' (ZJO_20140925)

Other Adverbials

(6) a. *Ch'oq wal achuytxa*
ch'uq(i) wal(i) achuy-t(a)-xa
potato well harvest-1SIM-TOP
'I harvest potatoes well.' (STL-KPB_20141201)

b. *Ch'oq kimsa pach achuytxa*
ch'uq(i) kimsa pach(a) achuy-t(a)-xa
potato 3 time harvest-1SIM-TOP
'I harvest potatoes three times.' (STL-KPB_20141201)

- Human direct objects require the allative case-marker *-ru*, but nevertheless still undergo suppression, as in (7). The case analysis would be forced to posit vacuous case-stacking.

Suppression on allative case marker *-ru*

(7) *Achilax uka paa imill wawanakar katuqatayna*
achila-x(a) uka paya imill(a) wawa-naka-r(u) katu-qa-tayna
grandfather DEM two girl child-PL-ALL receive-DW-3>3DIS
'The old man received these two girls.' (Layme 65-66)

5. Evidence II: Suppression blocking w/ marked prosody

- In certain marked intonational configurations, suppression can be blocked. Examples include a "dying breaths" prosody, whereby each phrase is its own intonational domain, as well as list intonation.

Speaker gives the following with their dying breaths:

(8) *Ch'oqe // kimsa pacha // achuytxa*
ch'uqi kimsa pacha achuy-t(a)-xa
potato 3 time harvest-1SIM-TOP
'I harvested potatoes three times.' (STL-KPB_20141201)

Speaker is giving a list of things the man ate:

(9) *Uka jaqex wank'u // ch'oqe // manq'awayataynax*
uka jaqi-x(a) wank'u ch'uqi manq'a-waya-tayna-x(a)
DEM man-TOP guinea.pig potato eat-DIST-3>3DIS-TOP
'The man ate guinea pig, potatoes.' (STL-KPB_20141110)

6. Evidence III: Suppression blocking in dislocation

- Right- and left-dislocation of a direct object may block suppression. All else being equal, this is unexpected under a case analysis (cf. Ott & de Vries 2015, a.o.).

Left-dislocation

(10) *Khuchh*(i) // jupax phayaskex*
khuchhi jupa-x(a) phaya-ski-x(a)
pig 3SG-TOP cook-PROG-TOP
'Pig, she's cooking.' (KPB_20150413)

Right-dislocation

(11) *Jupax phayaskex // uka khuchh*(i)*
jupa-x(a) phaya-ski-x(a) uka khuchhi
3SG-TOP cook-PROG-TOP DEM pig
'She's cooking [it], that pig.' (KPB_20150413)

7. Analysis

- (i) The verb phrase in Aymara is realized as a phonological (φ) phrase, intermediate to the word and intonational phrase (cf. Nespor & Vogel 1986).
- (ii) Vowel suppression is a phonological rule that applies at the right edge of a word inside a VP-derived φ -phrase. The rule operates differently in other syntactic domains, e.g. there are minimum size requirements for vowel suppression in nominal expressions (Coler 2014). Addressing its operation across other domains is a goal for future work.
- In expressions like (8) and (9), the marked prosodic configuration blocks application of rule (12ii).

(12) i. $[[]_{DP} []_{VP}]_{\varphi} \rightarrow [[]_{\omega} []_{\omega}]_{\varphi}$
ii. $V \rightarrow \emptyset / [\dots [\dots _]_{\omega} []_{\omega}]_{\varphi}$

8. Cross-linguistic support

- It is extremely common for a transitive verb and its direct object to form a single prosodic constituent. In particular, reduction and neutralization processes within said constituent is well-attested elsewhere.
- For example, in Turkish (Inkelas 1996), DO + Verb is a domain of application for voicing alternations, shown in (12).

(13) Turkish
a. *kitab* 'book'
b. *kitab-i* 'book-ACC'
c. *kitab okundu* 's/he read the book'

- Similarly, a process of vowel elision that is effected VP- and NP-internally is attested in Tangale (Chadic, Kenstowicz 1987). NB: Tangale has SVO word order and it is consequently the verb that undergoes final vowel deletion.

(14) Tangale (Chadic)
a. i. *Malay wa padé* 'Malay will buy [it].'
ii. *Malay wa pad(*é) yalam* 'Malay will buy oil.'
b. i. *ayaba* 'banana'
ii. *ayab(*a) noŋ* 'whose banana'

9. Conclusions

- The accusative case analysis misses generalizations regarding vowel suppression.
- It also forces a treatment of expressions like (7) as instances of vacuous case-stacking.
- Most importantly, it cannot account for blocking under marked prosody and dislocation without additional stipulations to block case marking.
- A related alternative would be to treat this as noun-incorporation, taking direct object + verb to be a single word. This treatment is unattractive because definite and specific readings are available.
- A promising future direction is to connect our prosodic analysis with the syntactic notion of *phase*.

Key to Abbreviations: Glossing conventions follow Coler (2014). AG = agentive, ALL = allative, DEM = demonstrative, DF = diffuse, DIS = distal past tense, DIST = distancer, DL = delimitative, DW = downward, FOC = focus, FUT = future, IMP = imperative, INCL = inclusive, INST = instantaneous, IRR = irrealis, IW = inward, NEG = negation, PL = plural, PROG = progressive, RE = resultative, REFL = reflexive, SG = singular, SIM = simple past tense, TOP = topic, UW = upward, X>Y marks a subject X and direct object Y in verb inflection. Examples that come from elicitation are cited with a 3-letter abbreviation indicating the elicitor and date coded as YYYYMMDD.

References: Albó, Xavier & Félix Layme (1992). *Literatura Aymara I*. La Paz: CIPCA, HISBOL, JAYMA. Coler, Matthew (2014). *A Grammar of Muylaq' Aymara*. Leiden: Brill; Hardman, Martha J. (2001). *Aymara*. Munich: Lincom Europa; Inkelas, Sharon (1996). "The interaction of phrase and word rules in Turkish: a paradox in the prosodic hierarchy" *The Linguistic Review* 13: 193-217; Kenstowicz, Michael (1987). "The phonology and syntax of Wh-expressions in Tangale" *Phonology Yearbook* 4: 229-241; Nespor, Marina & Irene Vogel (1986). *Prosodic Phonology*. Riverton: Foris; Ott, Dennis & Mark de Vries (2015) "Right-dislocation as deletion" *NLLT* (online).

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