

Prosody in Kichwa

by

Soledad Chango Masaquiza

Submitted to the Department of Linguistics and Philosophy in partial fulfillment of the
requirements for the degree of
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Abstract

This thesis investigates the prosodic system of Salasaka Kichwa, focusing on the interaction between pitch, morphosyntactic structure, and word order in both elicited and spontaneous speech. Based on data from ten native speakers of the Salasaka community, the study analyzes approximately 150 utterances using Praat and ToBI-style prosodic annotation. The findings reveal a consistent alignment between the nuclear pitch accent and the leftmost constituent of the verb phrase in neutral declarative sentences, supporting the hypothesis that Salasaka Kichwa exhibits a head-final syntactic structure. This default prosodic alignment is disrupted by the presence of focus-sensitive or interrogative morphemes such as *-mi* and *-chu*, which reliably attract the pitch peak regardless of their position in the clause. In ditransitive constructions, pitch prominence consistently targets the dative-marked argument. Accusative-marked objects also receive prominence, but only when modified; in such cases, it is typically the modifying adjective or contrastive element that bears the highest pitch. Overall, the study demonstrates that prosodic prominence in Salasaka Kichwa is not governed by syntactic structure alone. Instead, it emerges from a layered interaction between morphology, information structure, and pragmatic marking offering new insights into how prosody encodes grammatical and communicative functions in underdescribed head-final languages.

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This thesis is the result of years of listening, questioning, and collaborating, and I owe profound gratitude to the people who have guided and supported me throughout this journey.

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I would also like to thank Professor Edward Flemming and teaching assistant Cora Lesure for their valuable insights, discussions, and questions, which helped me refine my arguments and connect this work to broader conversations in the field. I am also deeply grateful to my MITILI peers for their camaraderie and support throughout this journey—your presence made this experience more vibrant, and together we built a community that enriched both my academic and personal life.

To my family: this work is rooted in your strength, love, and sacrifices. To my mother, Francisca Masaquiza, and my father, Jose Chango, thank you for always believing in me and for carrying our traditions with dignity. To my late brother, Roberto Chango, I carry your memory with me every step of the way. To my siblings—Magdalena, Rafael, and Luis Chango—thank you for your love, patience, and unwavering support from afar. I also thank all of my indigenous ancestors who fought so that we could have the right to learn and dream. It is because of them that today I become the first Indigenous Ecuadorian to graduate from MIT—hopefully the first of many. This thesis is a reflection of our story, our resistance, identity, language and our community.

Finally, to all who have supported me with their time, thoughts, and encouragement along the way—thank you. This project is not only a contribution to the study of Kichwa, but also a testament to the resilience, beauty, and enduring power of our language and people.

Shunkumanta yupaychani tukuy mashnalla kay taripayta rurunku yanapakkunata.

Biographical Sketch

Soledad Chango Masaquiza was born in 1993 in the Salasaka community, Pelileo, Ecuador. She earned her bachelor's degree majoring in English from Ambato Technical University and completed a professional certificate as a Kichwa Fulbright Foreign Language Teaching Assistant at Cornell University in 2022. In 2023, she entered the Master of Science in Linguistics program at the Massachusetts Institute of Technology.

Her research focuses on the prosody, syntax, and morphophonology of Kichwa. She is especially interested in the interaction between pitch, grammatical structure, and discourse in underdocumented languages. Beyond theoretical inquiry, her work is deeply grounded in the social responsibility of preserving Indigenous languages as living tools for cultural continuity, educational access, and intergenerational knowledge transmission. As a native Kichwa speaker, she advocates for the visibility and revitalization of her language in both academic and community spaces.

As a Fulbright scholar and native Kichwa speaker, Soledad's academic work is grounded in both linguistic theory and language justice. Her thesis, *Prosody in Kichwa*, explores pitch prominence and prosodic structure in Salasaka Kichwa, contributing to the broader understanding of head-final languages and the role of morphology in prosodic alignment.

Following the completion of her SM in Linguistics, she will begin a Ph.D. in Anthropology and Education at Columbia University, where she will continue her work at the intersection of language, education, and Indigenous knowledge systems.

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List of Symbols and Notation

Grammatical Abbreviations

The following list of abbreviations follows the Leipzig Glossing Rules and has been adapted to reflect Kichwa-specific grammatical and prosodic features used throughout this thesis.

Abbreviation	Meaning
1	First person
2	Second person
3	Third person
ABL	Ablative (used for -manta)
ACC	Accusative (direct object marker)
ADV	Adverb
CONJ	Conjunction suffix (e.g., -shi)
DAT	Dative (used for indirect objects, often marked by -man)
DIM	Diminutive
DIR	Directive (used for -man)
DO	Direct Object
FOC	Focus (e.g., -mi)
IMP	Imperative
INST.P	Instrumental Phrase
IO	Indirect Object
LOC	Locative (e.g., -pi)
NEG	Negation
NOM	Nominalizer
O	Object (general or direct)
PL	Plural
POSS	Possessive
PRES	Present tense
PERF	Perfect aspect (e.g., -shka)

PST	Past tense
Q	Question particle (e.g., -tak, -chu)
REFL	Reflexive
SG	Singular
TOP	Topic marker (e.g., -ka)
V	Verb

Prosodic/Phonological Notation (ToBI-style)

Abbreviation	Meaning
H	High tone
L	Low tone
H*	High pitch accent (nuclear)
L+H*	Rising pitch accent
H+L*	Falling pitch accent
L-	Phrase accent
H-	Phrase accent
%L	Low boundary tone
%H	High boundary tone

Prosody in Kichwa

Introduction

This study aims to analyze the prosodic features of Kichwa, with a particular focus on the Salasaka variety. The goal of this investigation is to expand the understanding of how intonation, pitch and stress patterns interact with different syntactic structures in Kichwa, contributing to the broader field of prosody in indigenous languages. By focusing on intonational contours across sentence types, this research also offers insights into how prosody shapes meaning and structure in Kichwa discourse.

By analyzing a set of Kichwa sentences with varying word orders, syllable numbers, and syntactic constructions, this initial analysis uncovers how constituents like adjectives, objects, adverbs, and verbs play a role in pitch modulation, with a particular emphasis on cases where adjectives, whether preceding or following the noun they modify, attract the highest pitch. These findings suggest that Kichwa prosody is highly sensitive to syntactic structure: variation in intonational contours correlates systematically with differences in sentence composition. For instance, in sentences with branching subject and object structures, adjectives often assume a prominent prosodic role, exhibiting the highest pitch.

1 The Kichwa Language and the Salasaka Variety

Kichwa (before/also spelled Quichua) is the most widely spoken indigenous language in Ecuador and a branch of the broader Quechuan language family, which extends across several Andean countries. Though its roots lie in the Quechua II group (specifically, the Northern Quechua subbranch), Ecuadorian Kichwa exhibits significant linguistic divergence from Southern Quechua varieties such as Cuzco or Ayacucho Quechua, due to both internal evolution and centuries of contact with Spanish and pre-Inca languages like those of the Barbacoan family (Floyd, 2003).

1.1 Linguistic Characteristics of Kichwa

Kichwa is typologically characterized as an agglutinative language with a predominantly Subject-Object-Verb (SOV) word order (O'Rourke, 2005). It makes extensive use of suffixes to mark grammatical relations, tense, mood, and evidentiality (Taguchi, et al, 2024). For

example, a single verb in Kichwa can encode information about the subject, object, tense, and aspect through stacked morphemes, such as in *puñu-naku-nka-kaman* = “until (someone) sleep together”.

In terms of phonology, Kichwa has a relatively small phonemic inventory and lacks the ejective consonants present in Southern Quechua varieties. It has also reduced its evidential system and lost the inclusive/exclusive distinction in the first-person plural. Modern Kichwa orthography—standardized in the 1990s—follows a phonemic principle and is officially recognized in Ecuador, though regional variation in pronunciation and lexical forms persists (Montaluisa, 2019). This dialectal variation poses challenges for orthographic standardization, especially in educational and revitalization contexts. The present study contributes to addressing this issue by providing a focused phonetic and prosodic analysis of the Salasaka variety, thereby enhancing our understanding of how regional differences manifest in natural speech.

1.2 The Kichwa of Salasaka

The Salasaka Kichwa variety is spoken in the central highlands of Ecuador, particularly in the province of Tungurahua. It belongs to the Highland Ecuadorian Kichwa subgroup and retains many core structural features of Northern Quechua while also demonstrating unique phonological and lexical traits. As part of a historically mobile and resilient community, Salasaka speakers have maintained a strong sense of linguistic and cultural identity despite external pressures; however, the last decade has demonstrated growing challenges, with younger generations speaking less Kichwa than older ones, or no Kichwa at all.

Regarding writing, Kichwa has a standardized orthographic system known as Unified Kichwa (UK). Currently, this writing system is rooted in its consolidation through the struggles of Indigenous peoples and nationalities, who, through social protests, pushed for linguistic inclusion in the Constitution of the Ecuadorian State. The concept refers to the linguistic standardization process aimed at establishing a common writing system for Ecuadorian Kichwa, supporting its preservation and strengthening in educational and sociopolitical contexts. At present, the unified writing system consists of 18 graphemes (see Chart 1).

Unified Kichwa Alphabet																	
a	ch	i	h	k	l	ll	m	n	ñ	p	r	s	sh	t	u	w	y

Table 1: Unified Kichwa Alphabet

According to Montaluisa (2019), this process faces significant challenges due to dialectal diversity and the phonetic and morphological differences among Kichwa variants, which make unification difficult. Additionally, its consolidation is closely tied to bilingual intercultural education within a context marked by diglossia and the influence of Spanish, presenting further challenges for its effective implementation and intergenerational functionality within Kichwa-speaking communities.

In light of these challenges, I developed an adapted version of the Unified Kichwa alphabet specifically for Salasaka Kichwa. This localized system reflects the unique phonological features of the Salasaka variety, including aspirated consonants and other segmental distinctions not represented in the official unified system which is used in all the examples in this research. While drawing from the foundational structure of Unified Kichwa, this modified inventory better captures the phonemic reality of Salasaka Kichwa and supports more accurate linguistic documentation and community-based literacy efforts. The top line shows the proposed Salasaka Kichwa alphabet based on the UK, while the bottom line displays corresponding allomorphs. (see Table 2).

PROPOSED KICHWA SALASAKA ALPHABET																							
b	ch	d	f	g	h	k	k^h	l	ll	m	n	ñ	p	p^h	r	s	sh	t	t^h	ts	w	y	z
p		t	P^h	k									f										

Table 2: Proposed Salasaka Kichwa Alphabet

1.3 Sociolinguistic Context

Kichwa is spoken by an estimated 300,000–700,000 people in Ecuador (Montaluisa, 2019). However, the language faces significant challenges due to language shift, particularly among younger generations who are increasingly monolingual in Spanish (Floyd, 2003). Historically marginalized in both educational and public domains, Kichwa has been referred to derogatorily as *yanka shimi* (“useless language”) in some social contexts (Taguchi et al.2024).

Efforts at revitalization include bilingual education, standardized orthography, and the development of digital and print resources such as the Killkan ASR corpus and the translation of national documents like the Ecuadorian Constitution into Kichwa (Floyd, 2003). Nonetheless, attitudes toward the language vary: while some advocate for purist forms of Kichwa devoid of Spanish influence, others view such linguistic purism as alienating and

impractical, especially in communities where code-switching and borrowing are part of daily life.

UNESCO classifies Kichwa as a vulnerable language, and Ethnologue lists various dialects under the endangered category. Despite official recognition in Ecuador's constitution and educational reforms promoting intercultural bilingualism, systemic inequalities continue to threaten the language's vitality (Escobar, 2011).

1.4 Toward a Thesis-Oriented Description

Given these dynamics, the study of Kichwa Salasaka is particularly timely. It offers insight into the intersection of linguistic structure, language contact, identity, and revitalization efforts. This thesis aims to contribute to a deeper understanding of Kichwa prosody grounded in community-based research.

2. Research Question

How does prosodic prominence, specifically pitch and stress interact with syntactic structures in Salasaka Kichwa, and what roles do constituents such as adjectives, instrumental phrases, datives, and objects play in determining pitch peaks across different sentence types?

3. Hypothesis

In Salasaka Kichwa, prosodic prominence patterns are closely aligned with syntactic structure rather than solely determined by information structure. Prominence (marked by higher pitch) tends to fall on syntactically prominent constituents such as focused objects, adjectives, or instrumental phrases, while verbs and subjects often appear deaccented. Variation in pitch correlates with changes in constituent order and clause type, indicating that prosody tracks syntactic configuration.

4. Methodology

Research Design

This study adopts a descriptive-analytical approach to examine the prosodic features of Salasaka Kichwa. It investigates how pitch and stress interact with syntactic configurations in both natural and elicited speech, drawing on instrumental phonetic analysis as well as native speaker intuition.

Participants

The data was collected from 10 native speakers of Salasaka Kichwa, including 5 women and 5 men, ranging in age from 13 to 65 (including me). All participants were long-term residents of the Salasaka community in Ecuador. Informed consent was obtained from all participants, and the study was approved by the relevant ethics board.

Data Collection

After creating a list of sonorant words, approximately 100 utterances were collected, combining both spontaneous speech and elicited data. Elicited sentences were obtained through two main methods: (1) read-aloud tasks and (2) picture description tasks, where speakers described culturally relevant or everyday scenes. Spontaneous data included conversational exchanges and narrative responses. The researcher, also a native speaker of Kichwa, contributed introspective data and guided elicitation based on community-appropriate prompts.

Recording and Equipment

Recordings were made using both a Blue Yeti USB microphone and an iPhone, directly into Praat (Boersma & Weenink, 2024) in a quiet room to ensure optimal audio quality. Each utterance was segmented into syllables and aligned with acoustic features for precise pitch tracking. Fundamental frequency (F0) was measured in Hertz (Hz) and tracked over time using Praat's pitch analysis tools, with manual corrections applied as necessary to refine automatic pitch detection.

Transcription and Annotation

All data were syllabically transcribed in **Praat** and annotated using the **ToBI (inspired Tones and Break Indices)** framework, adapted to Kichwa. Additionally, sentences were glossed using standard linguistic interlinear methods, including morpheme-by-morpheme glossing (e.g., *imashina* 'how', *wasi* 'house', *kan* 'BE.3SG'). Transcriptions included tonal marking of pitch accents (e.g., H*/L+H*, L*) and boundary tones (e.g., L%, H%).

Analytical Framework

The analysis focuses on identifying pitch peaks and stress placement across sentence types (e.g., SOV, SV, S-IP-V, etc.). Both syllable-level variation and utterance-level accentuation

patterns were considered. Native speaker intuition was employed to evaluate the naturalness and pragmatic functions of prosodic patterns, especially in cases of ambiguity or emphasis.

Tools and Data Management

Analysis was carried out using **Praat** for acoustic analysis, and **Microsoft Word and Excel** for data organization, annotation logs, and coding of prosodic patterns across sentence types.

Ethical Considerations

All procedures involving human participants were conducted in accordance with ethical standards. Participants were briefed on the purpose and use of their recordings, and verbal or written consent was obtained before recording. The research protocol was approved by an institutional ethics board.

Section 1

Prosodic Realization Across Basic Kichwa Sentence Structures

This section presents a series of declarative sentence types drawn from a corpus of Salasaka Kichwa, illustrating how prosodic prominence is distributed across different syntactic configurations. Rather than manipulating discourse contexts to alter focus or givenness, this analysis focuses on how changes in sentence structure such as subject or object branching affect prosodic realization, particularly pitch accent placement and boundary tones.

We observe that in simple SV sentences, the verb typically receives pitch prominence. When a direct object is introduced, the object usually carries the prosodic peak. In more syntactically complex utterances, such as those with branching subjects or objects, pitch prominence often aligns with adjectival modifiers within the object, rather than shifting toward syntactic edges. These patterns suggest that Kichwa prosody is systematically shaped by syntactic structure, with prominence sensitive to constituent type and internal complexity, rather than being purely driven by information structure per se.

1.1 Stress in Kichwa

Primary stress in Kichwa is generally observed in the penultimate syllable of a word., independently of the morphemes attached. See the example below.

- 1)
- | | | |
|----|----------------------------|---------------------|
| a. | Ki .ti | ‘town’ |
| b. | Ki. ti .pi | ‘in the town’ |
| c. | Ki.ti. ku .na | ‘towns’ |
| d. | Ki.ti.ku. na .pi | ‘in the towns’ |
| e. | Ki.ti. man .ta | ‘from the town’ |
| f. | Ki.ti.man. ta .pash | ‘from the town too’ |
| g. | Ki.ti.ku. na .lla | ‘the towns only’ |

Stress in sentences

- 2)
- | | | | | |
|----|-------------|------------------------|----------------------|--|
| a. | Ñaña-ka | Hambatu- man ta | muyu-mu-n | |
| | Sister-SUBJ | Ambato-ABL | go-REFL-3SG | ‘(My) sister has taken a round walk from Ambato’ |
| b. | Ñaña-ka | ha tun | wiwa-kuna-ta | mun a-n |
| | Sister-SUBJ | big | animal-PL-OBJ | like-3SG |
| | | | | ‘(My) sister likes big animals’ |
| c. | Ñaña-ka | ha tun-lla | wiwa-kuna-ta-pash | mun a-n |
| | Sister-SUBJ | big | animal-PL-OBJ | like-3SG |
| | | | | ‘(My) sister likes big(ish) animals too.’ |
| d. | Yuyay-wan | hu ru-ta | yanu- hu -nki | |
| | Yuyay-iNST | worm-ACC | cook-PROG-2SG | |
| | | | | ‘You are cooking worm with Yuyay’ |

The examples illustrate that primary stress in Kichwa is typically placed on the penultimate syllable, irrespective of the number of suffixes attached. This aligns closely with the findings in Erin O’Rourke’s (2010) study on Quechua intonation, where stress in Cuzco Quechua is also predominantly penultimate. Even when multiple morphemes are added, stress remains in the penultimate position, unless emphatic suffixes cause a shift to the final syllable. The pattern in Kichwa, therefore, supports the argument that stress assignment in these languages is largely morphological rather than lexically determined. These patterns will be examined in detail below.

1.2 Intonational Patterns

The analysis of Salasaka Kichwa adopts a ToBI-style annotation to describe pitch patterns and prosodic phrasing. Our findings similarly show that high pitch prominence often aligns with the penultimate syllable of the prosodically most prominent word or constituent. This pitch peak is typically followed by a boundary tone marking the end of the intonational phrase. Thus, while our observations parallel O'Rourke's in terms of surface pitch alignment, they are formalized differently within a ToBI-based descriptive system.

- Stress consistently falls on the penultimate syllable, regardless of morphological complexity or affixation.
- Stressed syllables are typically associated with either monotonal H* or bitonal L+H* pitch accents, depending on the phonetic context.
- A high boundary tone (H%) often marks the initial edge of an utterance
- Intermediate phrase boundaries are marked by L- tone, especially at subject phrase edges.
- Low boundary tones in declaratives and high boundaries in some questions.

1.3 SV Sentence Structure

In declarative sentences where there is no object, the subject is a branching structure, the verb tends to exhibit the highest pitch prominence. This pattern suggests that prosodic focus shifts to the verb, marking it as the prosodic nucleus in the sentence.

3)

Ñaña unkun
2.S 2.V
Ñaña unku-n
Sister be.sick-3SG
'(My) sister got sick'

Context Analysis:

This is a simple intransitive clause consisting of a subject ("Ñaña" = 'sister') and a verb ("unkun" = 'got sick'). The sentence appears in a narrative or conversational context where the speaker is providing new or backgrounded personal information about a close family member.

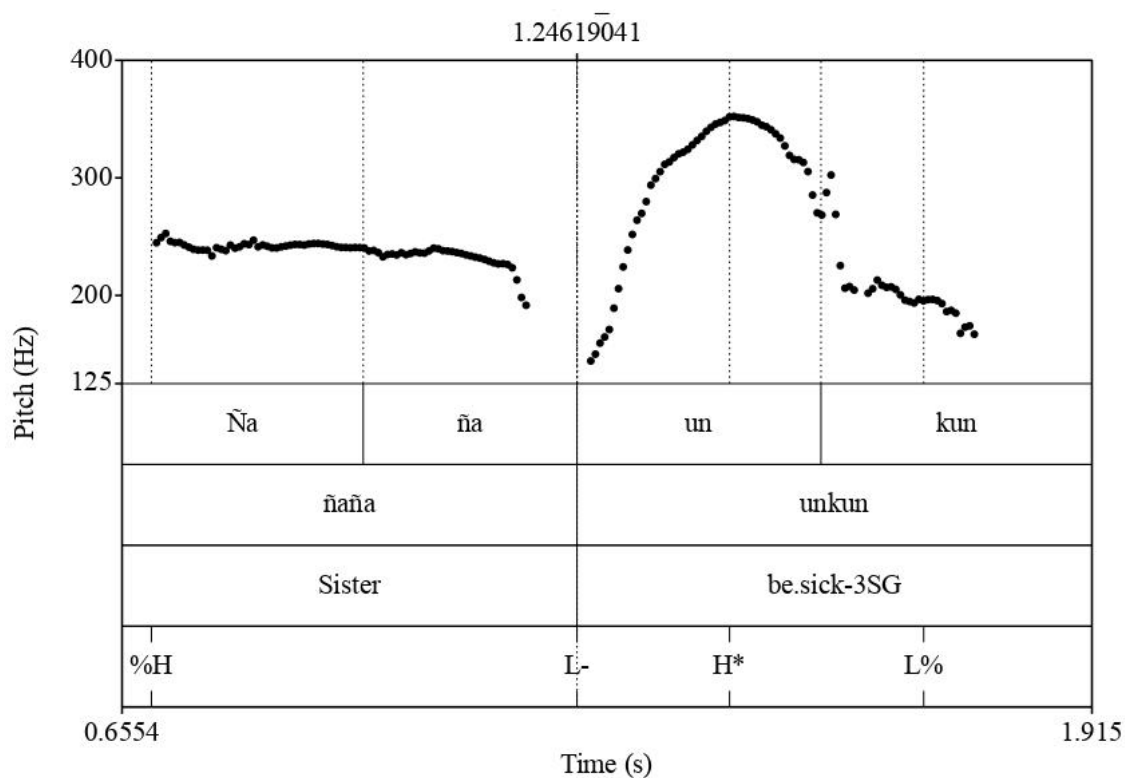


Figure 1: SV

Prosodic Structure Analysis:

- **Pitch Declination:** The pitch contour begins with a mid-level range on the subject, then rises sharply on the **first syllable of the verb**, followed by a sharp fall on the **final syllable**.
- **Prominent Word:** The verb ("**unkun**") shows the most significant pitch movement, indicating its prosodic and informational salience.
- **Intonational Characteristics:** The falling contour at the end of the utterance (marked as L%) is a hallmark of **declarative intonation** in Kichwa.
- **ToBI style Analysis:**
 - H* aligned with "**un-**" (high pitch accent)
 - L% aligned with "**-kun**" (low boundary tone)

1.4 Branching (Adj.)+S-V Sentence Structure

In declarative sentences with branching subjects—typically consisting of multiple modifiers or embedded elements—the verb continues to carry the primary pitch prominence. Despite the syntactic complexity of the subject, prosodic focus remains on the verb, reinforcing its role as

the prosodic nucleus. This suggests that increased subject complexity does not alter the default intonational pattern, where stress is aligned with verbal information.

4)

Ura-munta ñaña unkun
 [Uramunta ñaña] [unkun]
 4.Adj. 2.S. 2.V
 Ura-munta ñaña unkun
 down-ABL. sister get.sick-3SG
'The sister from down there got sick'

Context Analysis:

This sentence introduces a more specific referent by modifying the subject with a locative expression ("uramunda" = 'from down there'), likely to distinguish the sister from others in the discourse. It implies shared knowledge about multiple sisters or locations.

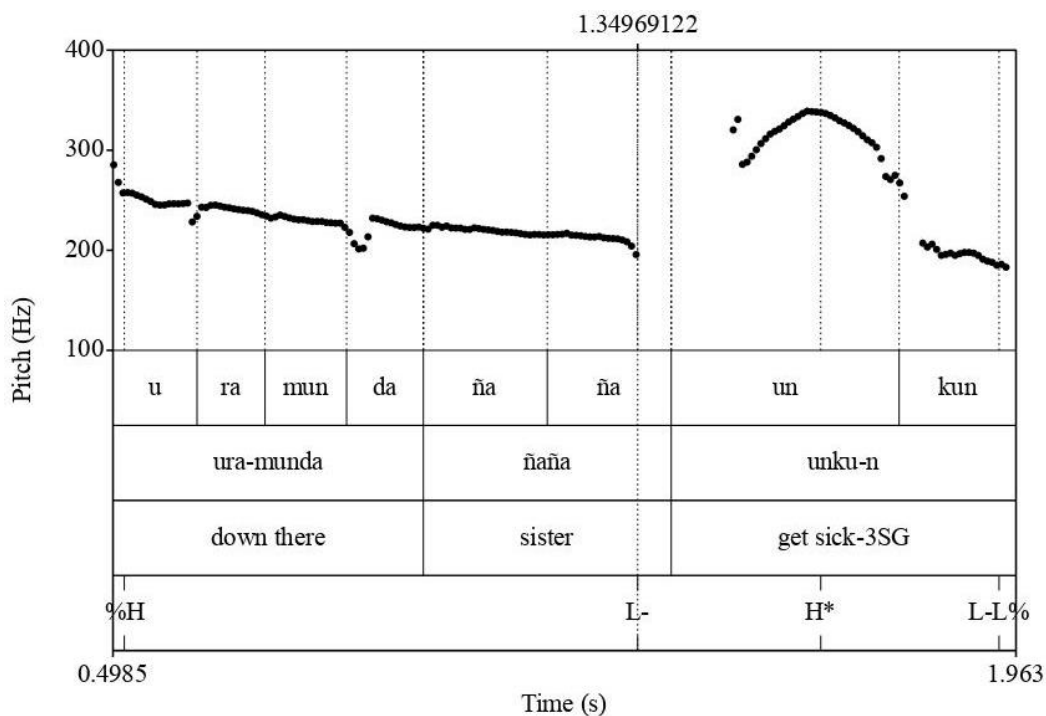


Figure 2: Adj+S-V

Prosodic Structure Analysis:

- **Pitch Declination:** The pitch contour begins at a relatively low-to-mid range across the subject phrase "Uramunta ñaña", maintaining a flat contour. It then **rises sharply** on the first syllable of the verb "un-", followed by a **sharp fall** on the final syllable "-kun".

- **Prominent Word:** The verb **"unkun"** displays the most dynamic pitch movement, signaling its **prosodic and informational salience** in the utterance.
- **Intonational Characteristics:** The **falling contour** at the end of the utterance, marked by the **L% boundary tone**, is characteristic of **declarative intonation** in Kichwa.
 - **%H** – High phrase-initial boundary tone (inferred from rising pattern at utterance onset)
 - **L-** – Low intermediate phrase boundary aligned with the end of the subject phrase *"ñaña"*
 - **H*** – High pitch accent aligned with *"un-"* (first syllable of the verb)
 - **L-%** – Low boundary tone aligned with *"-kun"*, marking utterance closure

1.5 SOV Sentence Structure

Now we incorporate an Object in the SV sentence to see the behavior here. In declarative sentences with an **SOV** structure, the object typically exhibits a pitch peak on its penultimate syllable, followed by a pitch fall on the final syllable. This pattern suggests that the penultimate syllable of the object receives prosodic prominence, while the final syllable undergoes a characteristic declination—a common trait in declarative intonation Richards (2017).

5)

Mamaka wawata apan
 [Mamaka] [wawata] [apan]
 3.S. 3.O 2.V
 Mama-ka wawa-ta apa-n
 mother-TOP child-ACC carry-3SG
'The mother carries the child.'

Context Analysis:

This is a transitive sentence with a topicalized subject (“Mamaka” = ‘the mother’) and a direct object (“wawata” = ‘the child’). The use of the topic marker **-ka** indicates that the mother is either already established in the discourse or is being contrasted with someone else. The verb “apan” denotes a physical action involving care or responsibility. This sentence likely appears in descriptive or narrative contexts involving caregiving, daily activities, or family roles.

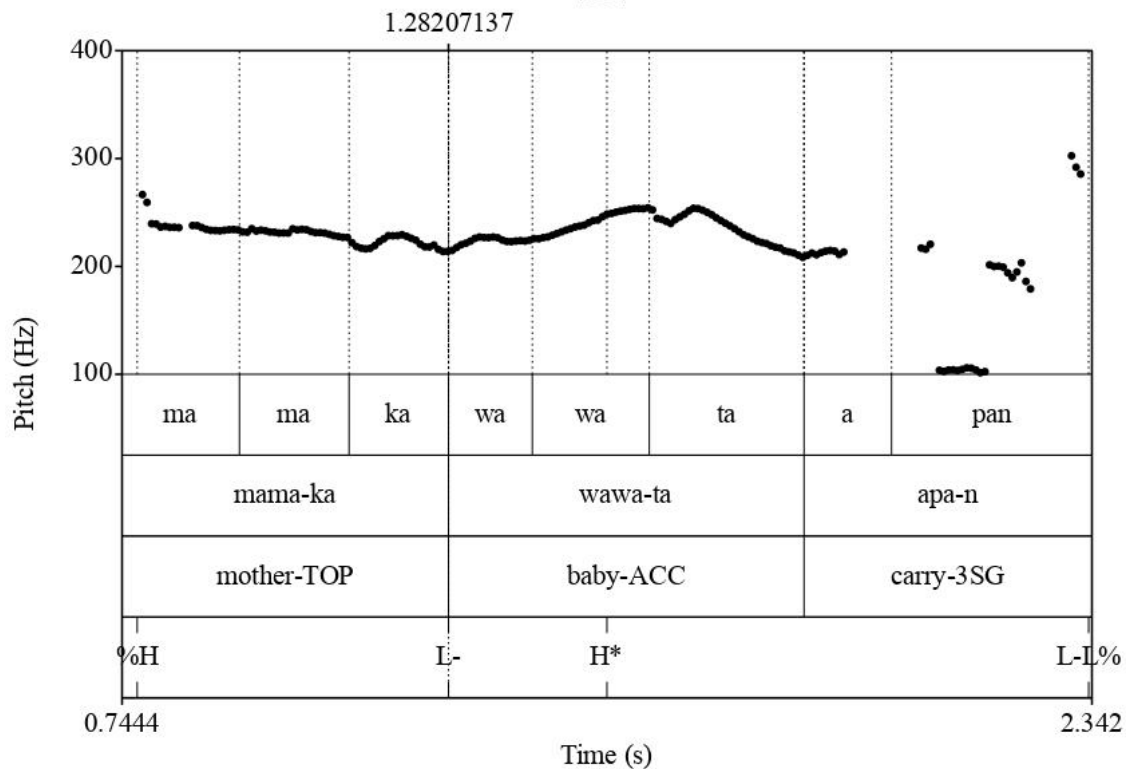


Figure 3: SOV

Prosodic Structure Analysis:

- **Prominent Words:** Both the subject (*mama*, "mother") and object (*wawa*, "baby") may show high intensity or pitch prominence, with the object demonstrating a higher pitch peak than the subject.
- **Intonational Characteristics:** The final syllable of the object consistently shows a falling pitch, reinforcing the sentence-final boundary tone typical of declaratives in Kichwa.

ToBI-style Analysis:

- **%H** — High boundary tone at the beginning of the utterance, marking the start of the intonational phrase.
- **L-** — Low phrase accent after the topicalized subject "**mamaka**", indicating a modest decline before the accented word.
- **H*** — High pitch accent aligned with "**wawa-**" in "**wawata**", marking the direct object as prosodically prominent.

- **L-L%** — Low boundary tone at the end of the utterance on "**-pan**" in "**apan**", indicating a canonical falling contour of a declarative sentence in Kichwa.

General Prosodic Characteristics of Kichwa Declarative Sentences

So far, our observations show that Kichwa declarative utterances typically exhibit a single major pitch prominence per phrase, most often the verb when no object is present. However, when an object is included, it typically receives the highest pitch peak. The pitch contour is characterized by a rise on the stressed syllable of the prosodically prominent word, followed by a sharp fall toward the end of the utterance, consistent with a final low boundary tone (L%). This rise-fall pattern gives Kichwa declaratives their distinctive intonational shape.

In what follows, we explore how Kichwa prosody responds to branching syntactic configurations, examining how pitch prominence shifts when subjects, objects, or both become more complex.

1.6 S-Adj.+O-V Sentence Structure with a Branching Object

In declarative sentences following the **SOV** structure, when the object is a branching phrase (i.e., an adjective modifying a noun), the adjective exhibits the highest pitch prominence, followed by a gradual pitch fall across the noun and its grammatical marker. This prosodic pattern indicates that the adjective carries the primary prosodic weight, while the noun and its suffix undergo declination, aligning with the prosodic structure of declarative intonation in Kichwa.

6)

Ñaña yana muyuta munan.
 [Ñaña] [yana muyuta] [munan].
 2.S 2.Adj 3.O 2.V
 Ñaña yana muyu-ta muna-n.
 Sister black grain like-3sg
 ‘Sister likes the black grain.’

Context Analysis:

This sentence expresses a preference or habitual action: the subject “Ñaña” (sister) likes a specific type of grain, described as “black” (“yana muyu”). The use of a definite and modified object suggests that the item is identifiable in the discourse context. This construction is likely

to appear in descriptive or conversational contexts, such as when discussing personal preferences, food habits, or characteristics of a family member. The adjective “yana” introduces contrast or specificity, possibly distinguishing the black grain from other types.

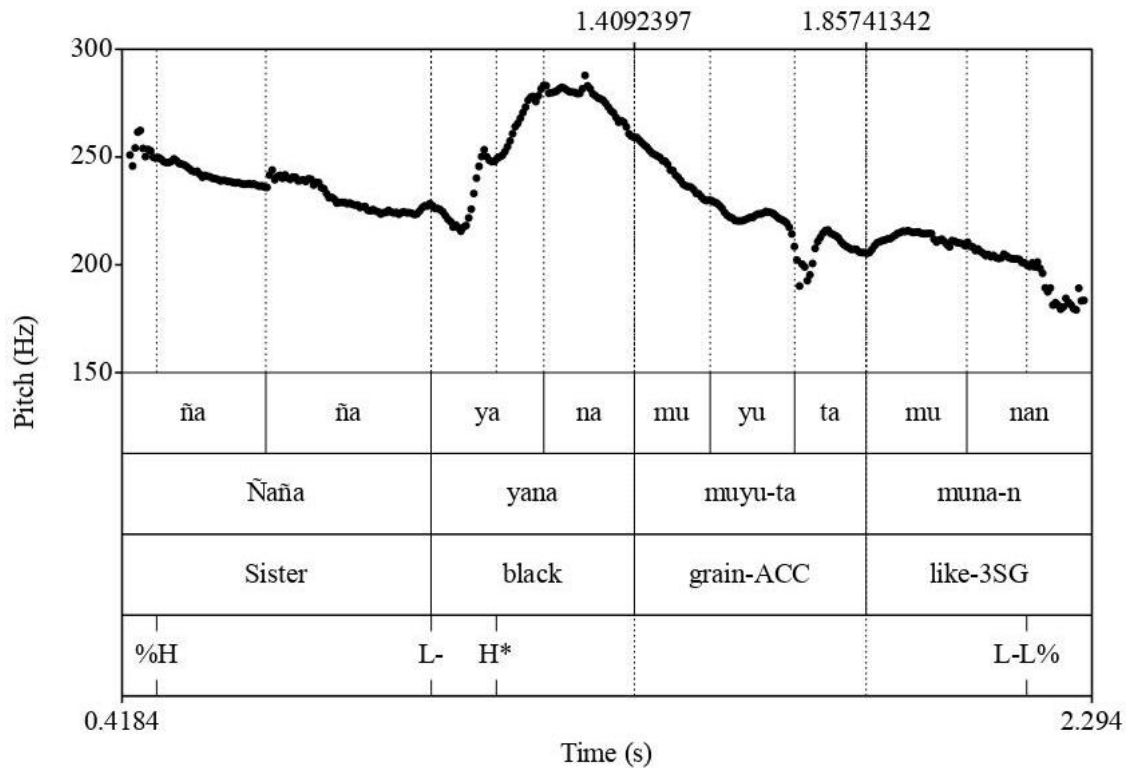


Figure 4: S-Adj+O-V

Prosodic Structure Analysis:

- **Prominent Words:** The highest pitch peak in the utterance is aligned with the first syllable of the adjective "yana" (‘black’), part of the noun phrase functioning as the object. The subject "Ñaña" shows a mid-level pitch with a slight decline, suggesting it is backgrounded or given information. The verb "munan" concludes the utterance with a low, steady pitch.

ToBI-style Analysis:

- %H — High boundary tone at the beginning of the utterance, anchoring the start of the intonational phrase.
- L- — Low phrase accent after the subject "Ñaña", marking the transition to new information.

- H* — High pitch accent aligned with "ya-" in "yana", emphasizing the adjective within the object phrase.
- L-L% — Low boundary tone aligned with "-nan" in "munan", signaling a neutral, declarative sentence closure.

1.7 Adj.+S-O-V Sentence Structure with a Branching Subject

In declarative sentences where the subject is a branching structure, the pitch focus is still on the object, with the object carrying the highest pitch prominence. This pattern suggests that, even when the subject contains additional descriptive elements, the prosodic peak remains on the object. This prosodic alignment highlights the object as the primary focus, reinforcing its role in sentence interpretation.

7)

Hillu wiwa muruta munan
 [Hillu wiwa] [muruta] [munan]
 2.Adj 2.S 3.O 2.V
 Hillu wiwa muru-ta muna-n
 Greedy animal grain-ACC like-3SG
'The greedy animal likes the grain'

Context Analysis:

The sentence describes a habitual action of an animal, emphasizing its greediness. It likely appears in storytelling or casual description of animal behavior, with “grain” as a familiar or contextually known object.

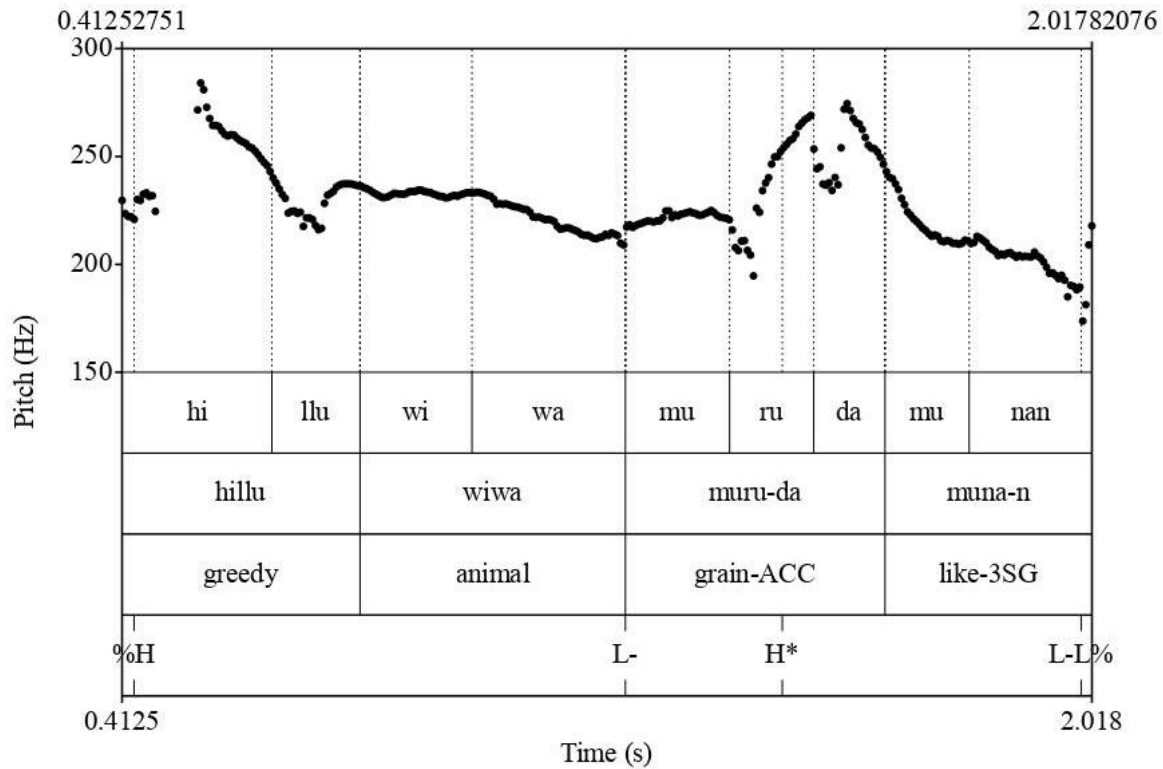


Figure 5: Adj+S-O-V

Prosodic Structure Analysis:

- **Prominent Word:** The noun "**muruta**" carries the highest pitch, marking the object as the prosodic focus.
- **Intonational Characteristics:** The contour follows the typical Kichwa declarative pattern: %H at the start, L- after the subject, H* on the object, and L-L% at the end.

ToBI-style Analysis:

- %H — utterance-initial
- L- — after “hillu wiwa”
- H* — on “ru” in “muruta”
- L-L% — on “-nan” in “munan” at the end

1.8 Adj.+S-Adj.+O-V Sentence Structure with a Branching Subject and Object in Kichwa

In declarative sentences where both the subject and object are branching structures, the adjective modifying the object tends to exhibit the highest pitch prominence. This pattern indicates that prosodic focus shifts to the adjective within the object phrase, aligning with patterns observed in other branching constructions.

8)

Wira wawa yana muyuta munan.
 [Wira wawa] [yana muyuta] [munan].
 2.Adj 2.S 2.Adj 3.Obj 2.V
 Wira wawa yana muyu-ta muna-n.
 Fat baby black grain-ACC like-3SG
'The fat bay likes the black grain.'

Context Analysis:

This sentence describes a general trait or preference of an animal, with both the subject ("wira wawa" = 'fat baby) and object ("yana muyuta" = 'black grain') being specified by adjectives. It likely occurs in narrative or descriptive contexts where the speaker distinguishes this animal or its behavior from others.

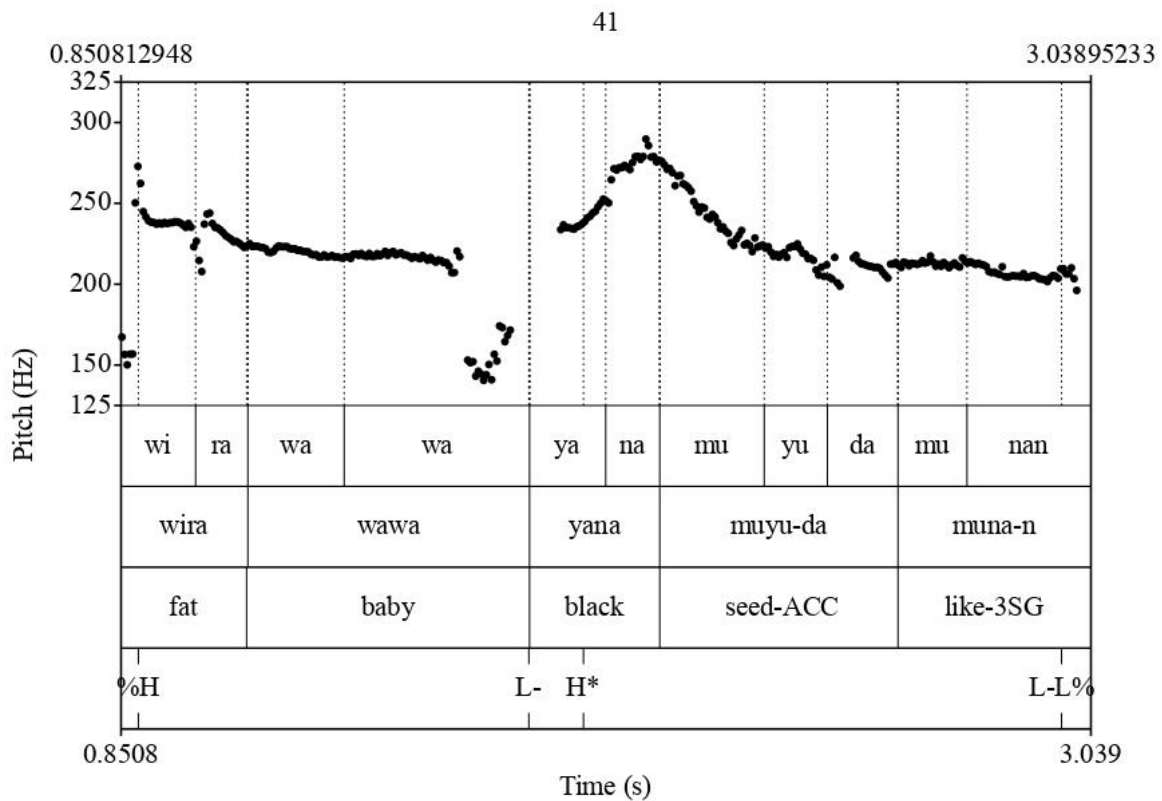


Figure 6: Adj+S-Adj+O-V

Prosodic Structure Analysis:

- **Prominent Word:** The peak pitch aligns with "yana", the adjective modifying the object "muyu-ta" ('black grain'), making it the prosodic nucleus of the utterance.

- **Intonational Characteristics:** The utterance follows the expected declarative pattern: it starts with %H, drops slightly with L- after the subject “wira wawa,” rises sharply on “yana” (H*), and ends with a falling L-L% boundary on the verb “munan.”

ToBI-style Analysis:

- %H — initial high boundary tone
- L- — after “wira wawa”
- H* — on "ya-" of “yana”
- L-L% — on "-nan" of “munan”

Summary of Findings

Across SOV declarative sentences in Kichwa, prosodic prominence consistently aligns with the most informative or modified element in the utterance in the VP. When the object is a branching noun phrase, the adjective within the object receives the highest pitch, indicating that modifiers within the object phrase attract prosodic focus. In contrast, when the subject is branching, prosodic prominence does not shift to the subject; instead, it remains on the object, highlighting the object’s discourse salience. Finally, in constructions where both the subject and object are branching, the adjective modifying the object reliably carries the pitch peak, further reinforcing a pattern in which prosody prioritizes the object domain, especially its descriptive modifiers.

These findings suggest that Kichwa prosody is closely tied to syntactic structure, particularly in how prominence is distributed within branching constituents. Rather than demonstrating variation based on information structure manipulated through discourse context, the observed pitch patterns correlate systematically with syntactic configurations, especially the internal structure of objects. Adjectival modifiers within objects consistently attract the pitch peak, even in more complex utterances, indicating that prosodic prominence in Salasaka Kichwa is sensitive to syntactic prominence within the clause, with a consistent preference for the object domain over the subject.

Section 2

Datives and the Distribution of Pitch in Double Object Constructions

In previous sections, we observed that Kichwa sentences with Subject-Object-Verb (SOV) order typically show pitch prominence aligned with the first lexical item in the verb phrase, most often the direct object (DO) when it appears alone. This section expands the analysis to include constructions with both a direct object and an indirect object (IO)—specifically, dative-marked recipients using the morpheme *-man*.

2.1 S - IO -DO - V

9)

a. **Wiñay wawaman wankuta kurka**

[Wiñay] [wawaman] [wankuta] [kurka]

2.S 3.I.O 3.DO. 2.V

Wiñay baby-DAT knitting.tool-ACC give-PST

‘*Wiñay gave the knitting tool to the baby.*’

Context Analysis:

This is a canonical ditransitive construction. The subject is an agent (Wiñay), the IO is a human recipient (baby), and the DO is an instrument. The baby is an animate, focused participant, which supports the alignment of nuclear pitch accent with the IO.

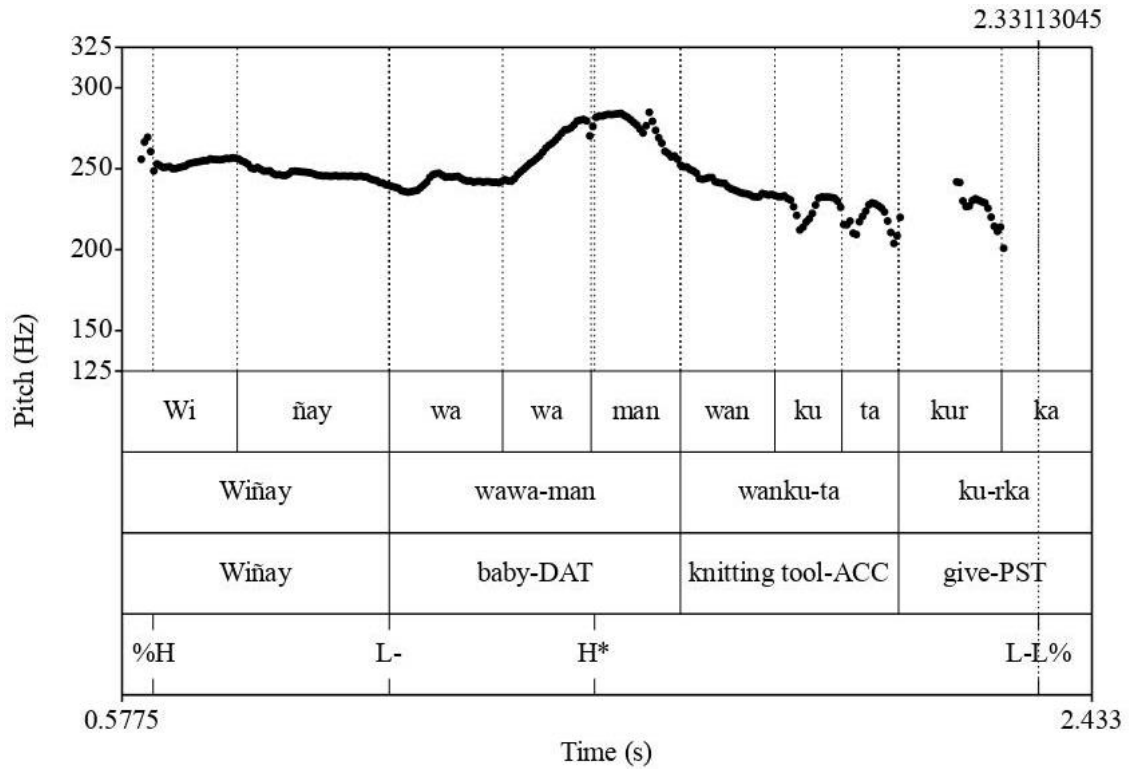


Figure 7: S - IO -DO - V

Prosodic Structure Analysis:

- **Pitch Declination:** The contour begins with a mid-level pitch on the subject "Wiñay", then dips slightly before rising sharply on "wawaman", followed by a steady fall across the DO and verb.
- **Prominent Word:** The indirect object ("wawaman") shows the most pronounced pitch movement, highlighting its informational salience.
- **Intonational Characteristics:** The utterance exhibits a clear intonational frame: a high initial boundary (%H), followed by subject-final L-, and ending in a falling L-L% boundary tone—hallmarks of Kichwa declarative intonation.

ToBI-style Analysis:

- %H on "Wiñay"
- L- after subject
- H* on "wa-man"
- L-L% at the end

2.2 S -DO - IO - V

This example presents the same sentence as in Example 9a, but with the direct and indirect objects switched—placing the direct object first. Despite the change in word order, the meaning remains identical to Example 9a due to clear case marking on both arguments.

b. Wiñay wankuta wawaman kurka

[Wiñay] [wankuta] [wawaman] [kurka]

2.S 3.DO 3.IO 2.V

Wiñay wanku-ta wawa-man ku-rka

Wiñay knitting.tool-ACC baby-DAT give-PST

‘Wiñay gave the knitting tool to the baby.’

Context Analysis:

This sentence describes a giving event, where the agent **Wiñay** transfers a tool (**wankuta**) to a recipient (**wawaman**, ‘baby’). Although the direct object appears before the indirect object, the meaning remains clear due to case marking. The utterance likely appears in a narrative or instructional context where emphasis may be placed on the item given or the act of giving.

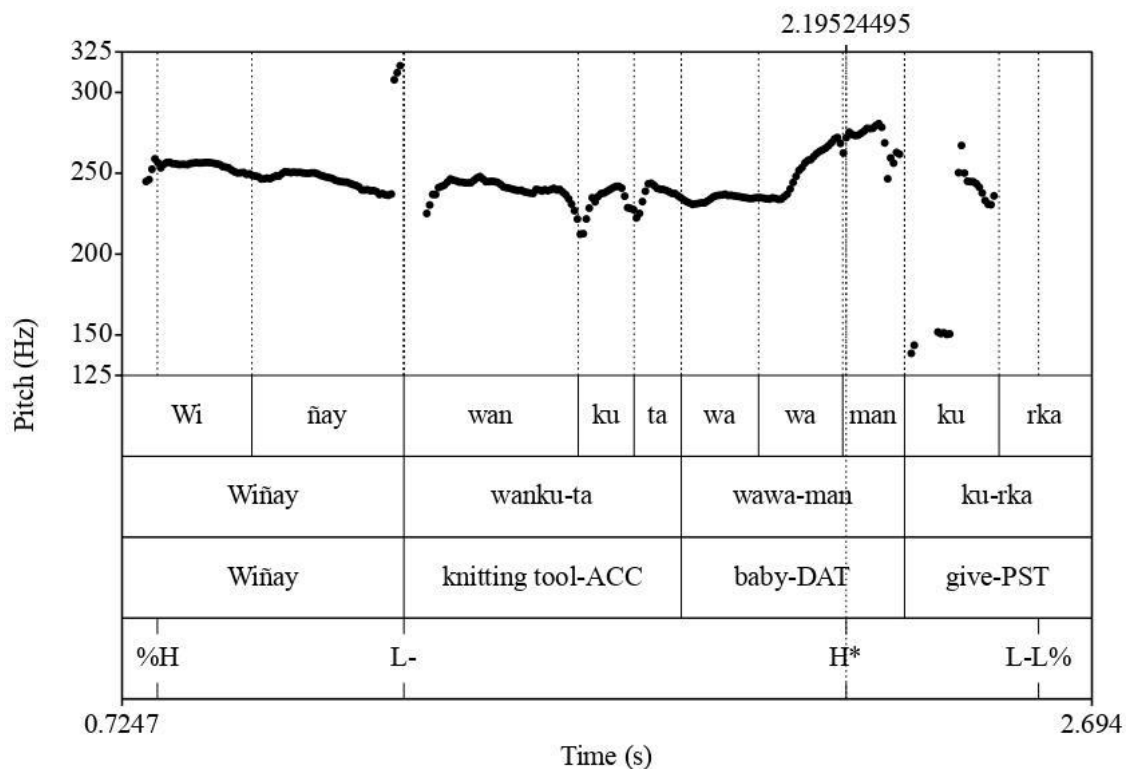


Figure 8: S -DO - IO - V

Prosodic Structure Analysis:

- **Pitch Declination:** The contour begins with a high boundary tone (%H), followed by a slight fall after the subject “Wiñay” (L-). The pitch remains low across the direct object "wankuta", but rises sharply on the indirect object “wawaman”, which bears the highest pitch peak in the utterance. The contour concludes with a falling tone across the verb. Unlike typical SOV sentences, this example stands out in that the indirect object (IO)—not the object or verb—receives the nuclear pitch accent, highlighting its prosodic prominence in the sentence.
- **Prominent Word:** The pitch peak aligns with “wawaman” (IO), despite its rightward position.

ToBI-style Analysis:

- %H on “Wiñay”
- L- after subject
- H* on “wa-man”
- L-L% at the end

2.3 S - Adj.+IO - DO - V

10)

Arawi wira amaruman yurata amullichirka
 [Arawi] [wira amaruman] [yurata] [amullichirka]
 2.S 2.Adj 4.IO 3.DO 5.V
 Arawi wira amaru-man yura-ta amullichirka
 Arawi fat snake-DAT tree-ACC feed-PST
 ‘Arawi fed the fat snake with the tree.’

Context Analysis:

This sentence depicts a feeding event where Arawi gives something (the tree, as an instrument or food source) to a fat snake. The recipient, "amaruman" (‘snake-DAT’), is animate and marked with the dative, while the direct object "yurata" (‘tree-ACC’) is inanimate. The structure mirrors typical ditransitive constructions, and the presence of the adjective "wira" (‘fat’) adds descriptive detail to the IO. Despite the non-human recipient, the sentence maintains the same syntactic and prosodic pattern found in previous examples with human IOs.

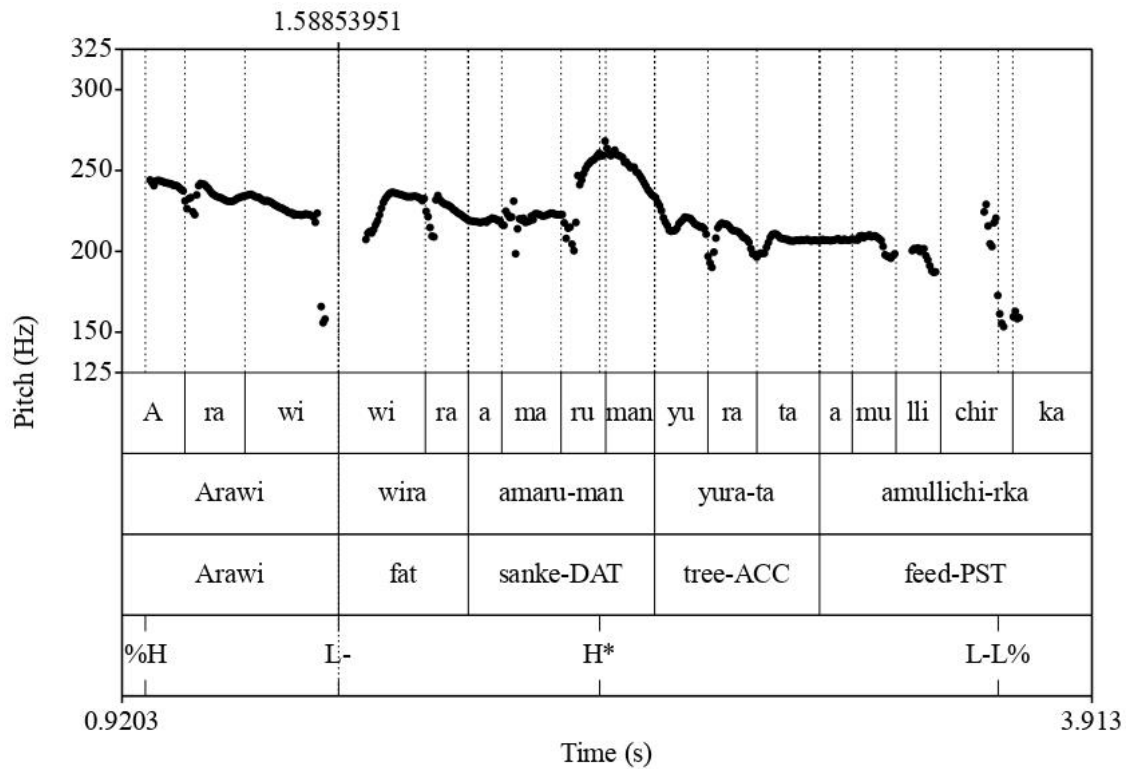


Figure 9: S - Adj.+IO - DO - V

Prosodic Structure Analysis:

- **Pitch Declination:** A mid-high %H on “Arawi”, followed by a slight decline and subject-final L-. The pitch rises on the IO “amaruman” (H*), then descends through the DO and verb.
- **Prominent Word:** “Amaruman” receives the pitch peak, regardless of branching complexity in the object.
- **Intonational Characteristics:** The utterance is bracketed by the declarative contour: %H, subject-final L-, and final L-L%.

ToBI-style Analysis:

- %H on “Arawi”
- L- after subject
- H* on “amaru-”
- L-L% on “-ka” of “amullichirka”

2.4 S - IO - Adj.+DO - V

11)

Raymi huruman hayak muyata karan
 [Raymi] [huruman] [hayak muyata] [karan]
 2.S 3.IO 2.Adj 3.DO 2.V
 Raymi huru-man hayak muyata kara-n
 Raymi worm-DAT spicy plant-ACC serve-3SG
 ‘Raymi served a spicy plant to the worm.’

Context Analysis:

This sentence describes a transfer event involving food, where Raymi serves a spicy plant to a worm. The indirect object "huruman" (worm-DAT) is animate but low in the animacy hierarchy, while the direct object "hayak muyata" (spicy plant) is inanimate and modified. The use of a dative-marked recipient maintains clarity and structure. Despite the unusual recipient, the sentence follows the same prosodic and syntactic pattern observed in previous examples with animate IOs.

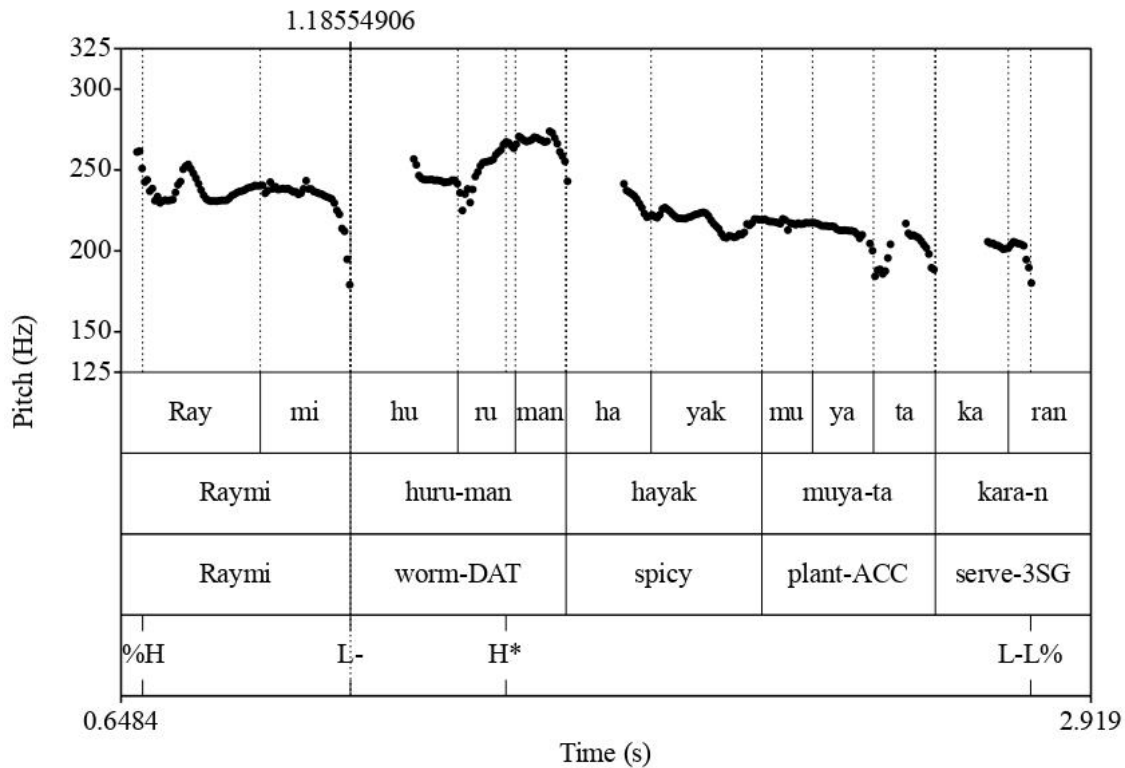


Figure 10: S - IO - Adj.+DO - V

Prosodic Structure Analysis:

- **Pitch Declination:** Begins with %H on “Raymi”, falls to L- after the subject, then rises sharply on “huruman” (IO), with pitch tapering off across the rest of the utterance.
- **Prominent Word:** Peak pitch is on the dative “huruman”, reinforcing its syntactic and prosodic prominence.
- **Intonational Characteristics:** Displays the full declarative contour: %H, L- following the subject, and a final L-L% boundary tone.

ToBI-style Analysis:

- %H on “Raymi”
- L- after subject
- H* on “ru” of “huruman”
- L-L% on “-n” of “karan”

2.5 S - Adj.+IO - Adj.+DO - V

12)

Wayna waminsí warmiman yana wayruta kun
 [Wayna [waminsí warmiman] [yana wayruta] [kun]
 2.S 3.Adj 3.IO 2.Adj 3.DO 2.V
 Wayna waminsí warmi-man yana wayru-ta ku-n
 young man pink woman-DIR black wayru-ACC give-3SG
 ‘The young boy gave the black wayru to the pink woman.’

Context Analysis:

This sentence describes a giving event involving two modified noun phrases. The subject "Wayna" ('young man') gives a direct object "yana ¹wayruta" ('black wayru') to a recipient "waminsí warmiman" ('pink woman-DIR'). Both the IO and DO are lexically complex with adjectives, yet the dative-marked recipient maintains syntactic and prosodic prominence. The construction fits naturally within narrative or descriptive contexts and follows the same prosodic pattern observed in prior ditransitives, with the IO consistently attracting the pitch peak.

¹ **Wayru:** a traditional object carved from the dried leg bone of a cow. It is typically engraved with circular designs painted in black and is used in mourning. These games are primarily played by men as part of cultural rituals or communal gatherings.

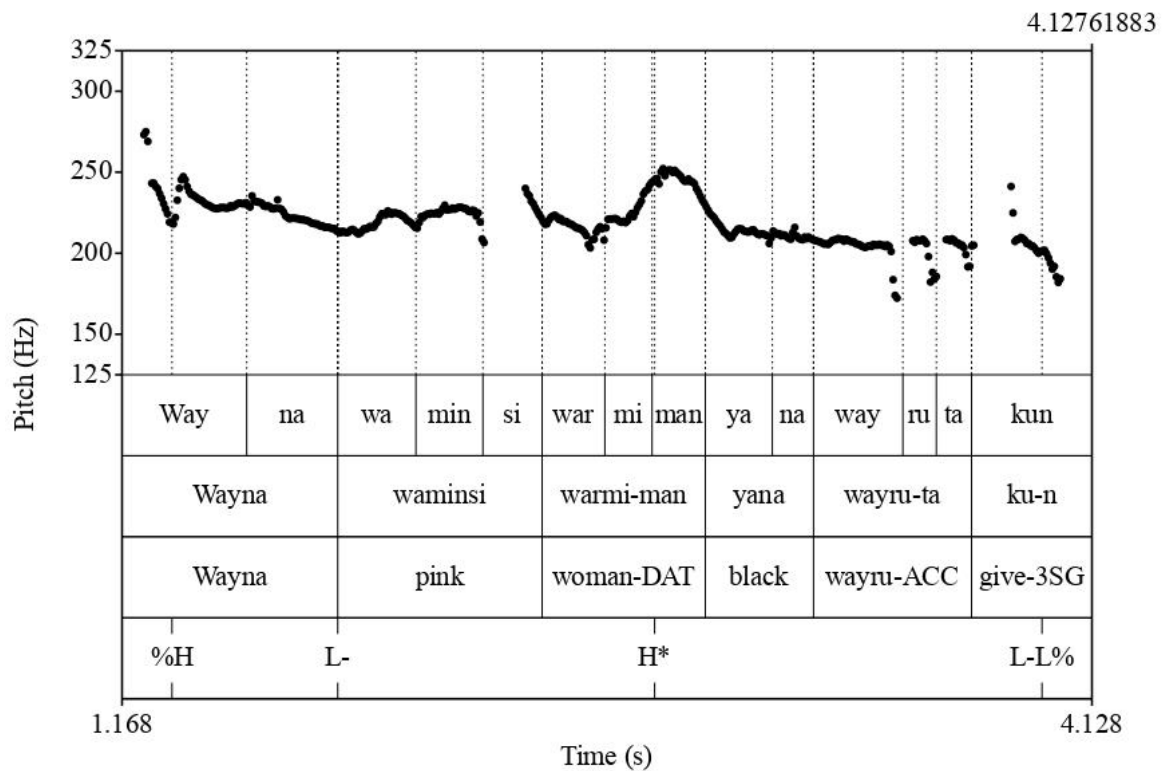


Figure 11: S - Adj.+IO - Adj.+DO - V

Prosodic Structure Analysis:

- **Pitch Declination:** The utterance opens with %H, followed by a slight decline and L- boundary after “Wayna”. The pitch rises markedly on “warmiman” (IO), then descends smoothly through the DO and final verb.
- **Prominent Word:** “Warmiman” carries the nuclear pitch accent, even amid branching on both objects.
- **Intonational Characteristics:** Follows a clearly defined intonational frame: %H onset, L- after subject, and L-L% closure—strongly indicative of Kichwa’s prosodic packaging of declaratives.

ToBI-style Analysis:

- %H on “Wayna”
- L- after subject
- H* on “mi-” of “warmiman”
- L-L% on “-n” of “kun”

Summary of Findings

Across all the examples presented, a consistent prosodic pattern emerges: the highest pitch peak (H*) consistently aligns with the dative-marked noun (-man), regardless of its position, complexity, or whether a direct object (DO) follows. This includes simple, branching, or semantically heavy indirect objects (IOs). Even when the direct object is more lexically complex or adjacent to the verb, the pitch prominence is assigned to the dative NP.

Comparison with Accusative Alignment

This pattern contrasts with the behavior observed in accusative-marked objects (see Section 1). There, the pitch peak aligns with the **leftmost element** of the object phrase: on the noun when the object is simple, and on the adjective when present. In contrast, dative-marked arguments consistently receive the pitch peak **on the noun itself**, regardless of internal structure. This prosodic behavior highlights a fundamental difference in how Salasaka Kichwa assigns prominence within dative versus accusative constituents.

Section 3

Instrumental phrases

With the baseline prosodic patterns established across simple and branching SOV and S-IO-DO-V structures, we now turn to sentences that incorporate **instrumental phrases**. In the following section, we examine how the addition of instrumental elements affects pitch alignment and prominence assignment, and whether these elements disrupt or reinforce the prosodic nucleus observed in previous structures.

3.1 S - INST.P - V Sentence Structure in Kichwa

In declarative sentences following the S - Instrumental Phrase (INST.P) - V structure, the instrumental phrase receives the highest pitch prominence. This pattern suggests that prosodic focus shifts to the instrumental phrase, making it the prosodic nucleus of the sentence.

13)

Wiñay Ninawan wampun
[Wiñay] [Ninawan] [wampun]
2.S 3.INST.P. 2.V
Wiñay Nina-wan wampu-n
Wiñay Nina-INST float-3SG
‘Wiñay is swimming with Nina’

Context Analysis:

This sentence expresses a joint action where Wiñay is swimming together with Nina, marked by the instrumental suffix -wan. The verb "wampun" (‘float/swim’) describes a shared or cooperative activity. The construction likely appears in conversational or narrative contexts to describe companionship or collective motion, with the instrumental phrase highlighting Nina’s involvement in the action.

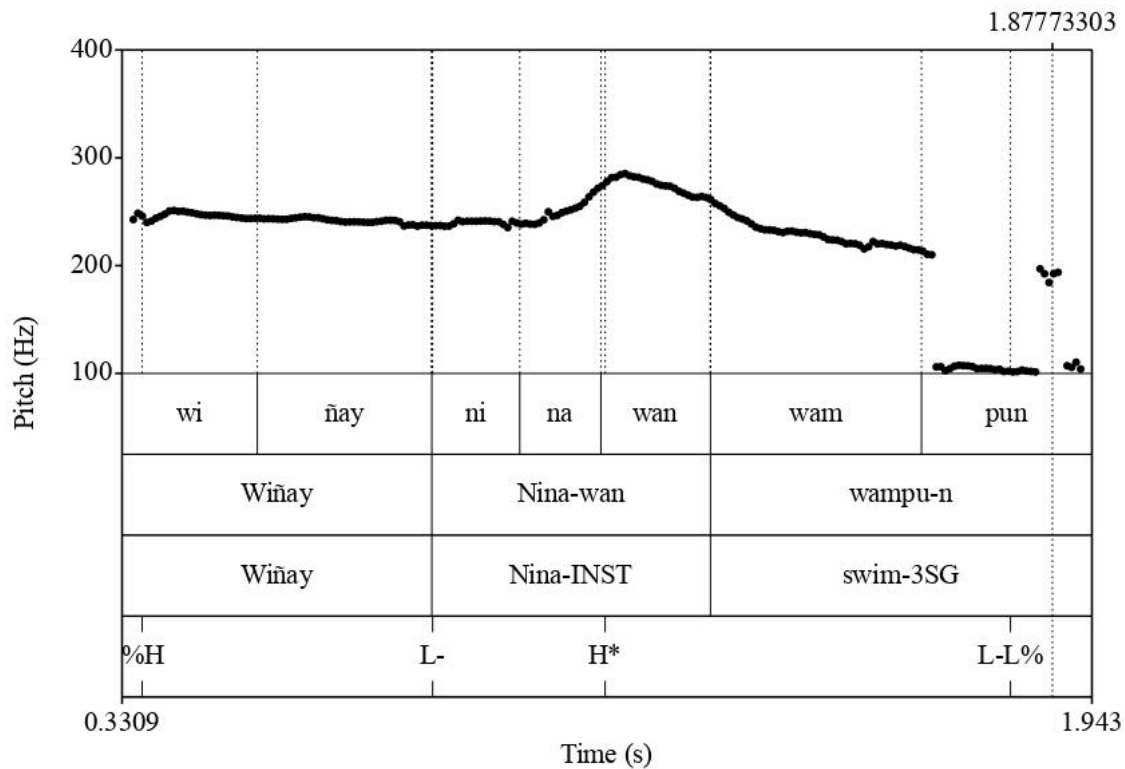


Figure 12: S - INST.P - V

Prosodic Structure Analysis:

- **Prominent Word:** The instrumental phrase "Ninawan" ('with Nina') carries the pitch peak, indicating that the co-participant is prosodically highlighted.
- **Intonational Characteristics:** The utterance begins with a high boundary tone (%H), followed by a subject-final L-, a rising pitch (L-H*) on the instrumental, and a final low boundary (L-L%) on the verb, conforming to the declarative contour typical of Kichwa.

ToBI-style Analysis:

- %H — on "Wiñay"
- L- — after the subject
- L-H* — pitch rise on "Nina-wan"
- L-L% — on "-pun" in "wampun"

This prosodic alignment suggests that in S - INST.P - V constructions, Kichwa assigns primary stress to the instrumental phrase, reinforcing its role as the prosodic nucleus, while the verb remains deaccented, aligning with previous findings on declarative sentence intonation.

3.2 S - Adj. INST.P - V Sentence Structure

In declarative sentences following the S - Adjective - Instrumental Phrase (INST.P) - V structure, the instrumental phrase receives the highest pitch prominence. This pattern suggests that prosodic focus shifts to the instrumental phrase, making it the prosodic nucleus of the sentence.

14)

Wiñay yana muyuwan yanun
 [Wiñay] [yana muyuwan] [yanun]
 2.S 2.Adj 3.INST.P 2.V
 Wiñay yana muyu-wan yanu-n
 Wiñay black grain-INST cook-3SG
 'Wiñay cooks with black grain'

Context Analysis:

This sentence describes an action involving an instrument: Wiñay is cooking using black grain. The instrumental phrase “yana muyuwan” is lexically complex and marked with -wan, highlighting the means or material involved in the action. This construction likely appears in descriptive or procedural contexts, emphasizing either the method of cooking or the ingredient used.

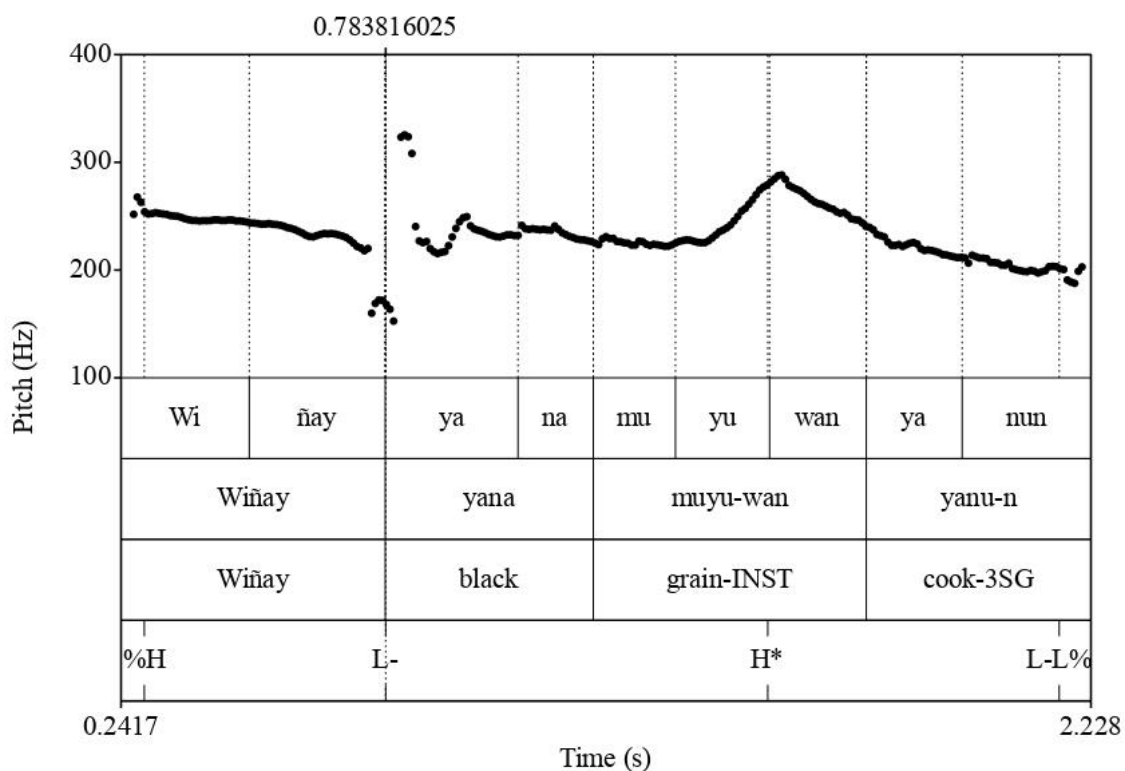


Figure 13: S – Adj. INST.P – V

Prosodic Structure Analysis:

- **Prominent Word:** The instrumental phrase “**muyuwán**” (‘with grain’) carries the pitch peak, emphasizing the tool or means involved in the action.
- **Intonational Characteristics:** The utterance follows the typical Kichwa declarative contour: %H onset, a low phrase accent (L-) after the subject, a rising L-H* on the instrumental phrase, and L-L% boundary tone on the verb.

ToBI-style Analysis:

- %H — on “Wiñay”
- L- — after the subject
- L-H* — on “**muyuwán**”
- L-L% — on “**yanun**”

This prosodic alignment suggests that in S – Adj. INST.P – V constructions, Kichwa assigns primary stress to the instrumental noun, reinforcing its role as the prosodic nucleus. Meanwhile, the adjective does not receive prominence, and the verb remains deaccented, aligning with previous findings on Kichwa declarative intonation. Instrumental phrases show the same pattern that we saw for dative phrases in Section 2: when these nouns are modified by adjectives, the pitch peak is on the noun rather than the adjective. As we saw in Section 1, accusative objects show a different pattern, in which the pitch peak appears on the adjective when one is present.

3.3 Adj. S – INST.P – V Sentence Structure in Kichwa

In declarative sentences with the Adjective – Subject – Instrumental Phrase (INST.P) – Verb structure, the instrumental phrase receives the highest pitch prominence. This pattern suggests that prosodic focus remains on the instrumental phrase, reinforcing its role as the prosodic nucleus.

15)

Alli mara haylliwan arman
 [Alli mara] [haylliwan] [arman]
 2.Adj 2.S 3.O 2.V
 Alli mara haylli-wan arma-n
 Good child song-INST take shower-3SG
‘The good child takes the shower with the song’

Context Analysis:

This sentence describes a habitual or expressive action: a good child (*alli mara*) takes a shower accompanied by a song (*haylliwan*). The instrumental phrase suggests a cultural or emotional dimension, where singing is part of the bathing routine. The sentence likely appears in descriptive or narrative contexts, possibly highlighting mood, behavior, or cultural practice.

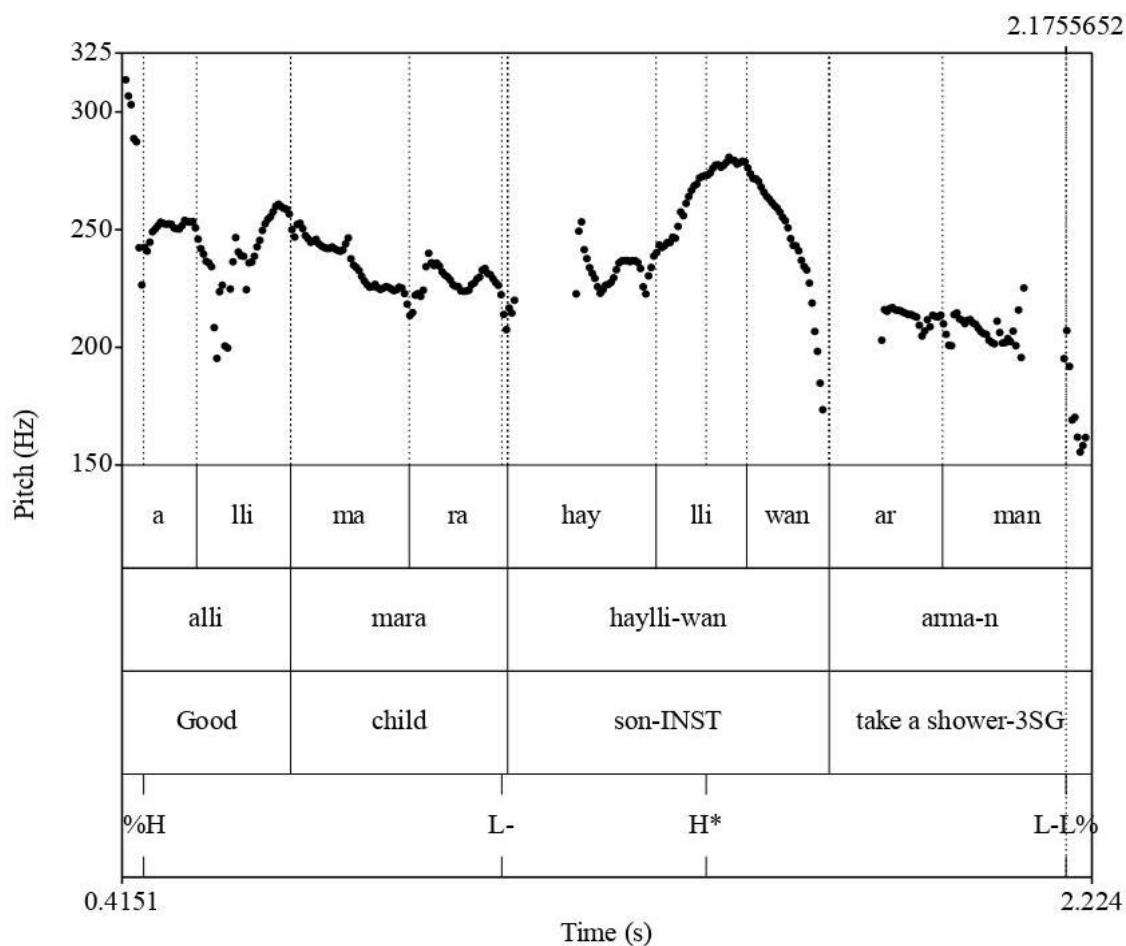


Figure 14: Adj. S - INST.P - V

Prosodic Structure Analysis:

- **Prominent Word:** The pitch peak is located on the instrumental phrase "**haylliwan**" ('with the song'), indicating prosodic focus on the accompaniment.
- **Intonational Characteristics:** This utterance shows the standard declarative contour in Kichwa: %H at the start, L- after the subject phrase, H* on the instrumental, and L-L% on the final verb.

ToBI-style Analysis:

- %H — initial high boundary on "alli"
- L- — after the subject "alli mara"
- H* — aligned with "haylli-" in "haylliwan"
- L-L% — falling boundary tone on "arman"

This prosodic alignment suggests that in Adj. S - INST.P - V constructions, Kichwa assigns primary stress to the instrumental phrase, reinforcing its role as the prosodic nucleus. Meanwhile, the adjective and subject do not receive prominence, and the verb remains deaccented, consistent with previous findings on Kichwa declarative intonation.

3.4 Adj+S - Adj+INST.P - V Sentence Structure

16)

Wira mama waminsí arawíwan tushun

[Wira mama] [waminsí arawíwan] [tushun]

2.Adj 2.S 3.Adj 4.INST.P 2.V

Wira mama waminsí arawí-wan tushu-n

curvy mother pink poem-INST dance-3SG

'The curvy mom dances with a pink poem'

Context Analysis:

This sentence describes a visually expressive and possibly poetic action involving a curvy mother who dances accompanied by a pink poem. The instrumental phrase "arawíwan" ('with a poem') adds an artistic or performative layer to the event. The adjectives "wira" ('curvy') and "waminsí" ('pink') create a vivid, colorful tone, evoking a scene rich in imagery. This construction could be used in storytelling, song lyrics, or metaphorical speech, where both the subject and the instrument are described with aesthetic or symbolic detail.

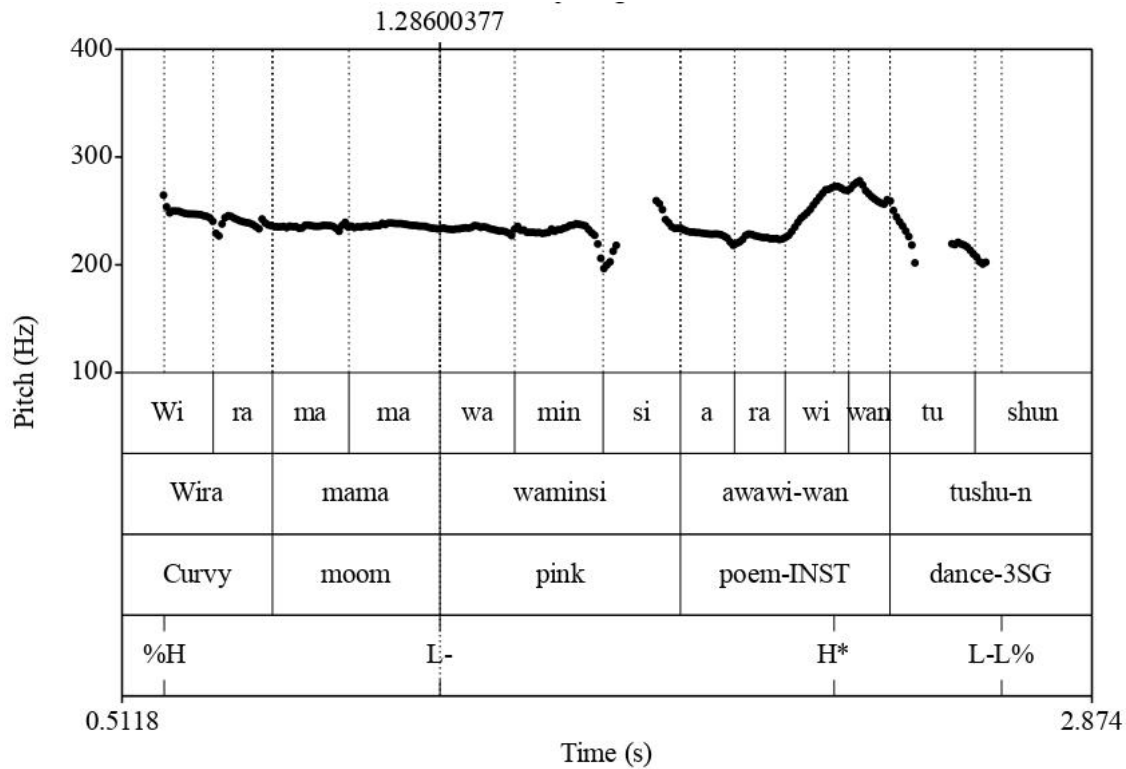


Figure 15: Adj+S - Adj+INST.P - V

Prominent Word: The pitch peak aligns with the instrumental phrase "awawiwantu" ('with a poem'), specifically on the syllable "wi", indicating that the nuclear pitch accent (H*) falls within the instrumental, not on the adjective "waminsa". This reflects a shift in prosodic focus from descriptive adjectives to the instrument of the action.

Intonational Characteristics:

The sentence exhibits a canonical Kichwa declarative contour:

- Initial high boundary tone (%H) on "wira".
- A low phrase accent (L-) follows the subject "wira mama", spanning the adjective "waminsa", which does not receive a pitch peak.
- A clear H* pitch accent is realized on "awawiwantu".
- The contour ends with a falling boundary tone (L-L%) on the final verb "shun".

ToBI-style Analysis

- %H — on "wira"
- L- — after the subject phrase "wira mama"
- H* — on "awawiwantu" (specifically the syllable "wi")
- L-L% — on "shun"

This analysis suggests that instrumental phrases can bear nuclear pitch accents when no focused constituents appear earlier in the sentence.

Summary of findings

The instrumental constructions analyzed in this section continue to reveal a consistent prosodic pattern across both simple and branching structures. Regardless of sentence complexity or the presence of multiple modifiers (e.g., adjectives), the instrumental noun consistently attracts the nuclear pitch accent, typically realized as H*. Notably, even when preceded by adjectives within the same phrase or by modified subjects, the pitch prominence reliably aligns with the instrumental.

In all observed cases, the utterance conforms to the broader declarative prosodic template established in earlier sections:

- An initial high boundary tone (%H) at the beginning of the utterance
- A low phrase accent (L-) following the subject
- A pitch peak (H*) aligned with the instrumental phrase
- A final low boundary tone (L-L%) on the verb

This pattern demonstrates that instrumental phrases are a consistent site of nuclear pitch accent in Kichwa, even when they occur mid-utterance. The prosodic focus appears to override purely structural or linear factors—adjectives like "waminsí" remain deaccented, while the instrumental receives prosodic prominence. This suggests that Kichwa assigns informational or semantic prominence to instruments within the clause, potentially reflecting their salience in event representation.

Furthermore, the presence of branching subjects and internally complex NPs does not disrupt this alignment, underscoring the robustness of the pattern. The nuclear pitch accent is not merely rightmost nor obligatorily subject- or object-aligned, but consistently marks the instrumental constituent as a prosodic and interpretive focal point within the utterance.

Section 4

Imperatives in Kichwa Prosody

This chapter explores the prosodic patterns of imperative constructions in Kichwa, focusing on how pitch and stress interact with syntactic structure. Building on the analysis of declarative sentences from previous sections, we now turn to imperative sentences—commands, suggestions, and requests—which display unique prosodic and morphosyntactic features. We investigate basic imperative structures (e.g., SOV.Imp), as well as those with branching constituents, such as instrumental phrases (S–INST.P–V). Given the agglutinative nature of Kichwa and its flexible word order, imperative constructions offer rich terrain for examining the interface between prosody, morphology, and syntax. Special attention is paid to how prosodic prominence shifts depending on the presence of branching modifiers and discourse elements, contributing to a broader understanding of how speaker intent and sentence force are encoded in Kichwa intonation. The verb morphology in imperatives typically includes the suffix **-y** (neutral command) or **-way**, **-pay**, **-bay** (a more polite or softened imperative), allowing speakers to adjust the level of directness or politeness in line with social context.

4.1 (S) – O – V (IMP) Sentence Structure in Kichwa

In imperative sentences with a simple (S)–O–V.IMP structure, the prosodic contour is marked by a high pitch peak (H*) on the verb, which conveys the command force of the utterance. Although the subject is not overtly expressed, the verb’s morphology indicates agreement with a second person subject, allowing the speaker’s intended addressee to be inferred from the verb form itself.

17)

Yuyuta maylliy
[yuyuta] [maylliy]
3.OBJ 2.V
yuyu-ta maylli-y
vegetable-ACC clean-IMP
‘Wash the vegetable’

Context Analysis:

This sentence is a direct command instructing someone to wash a vegetable. The subject is not overtly stated, which is typical in imperatives, but the verb "**mayllyi**" ('wash-IMP') clearly targets a second-person listener. The object "**yuyuta**" ('vegetable-ACC') is specific and singular, indicating that the command refers to a particular, contextually accessible item. This type of utterance is commonly used in everyday, task-oriented settings.

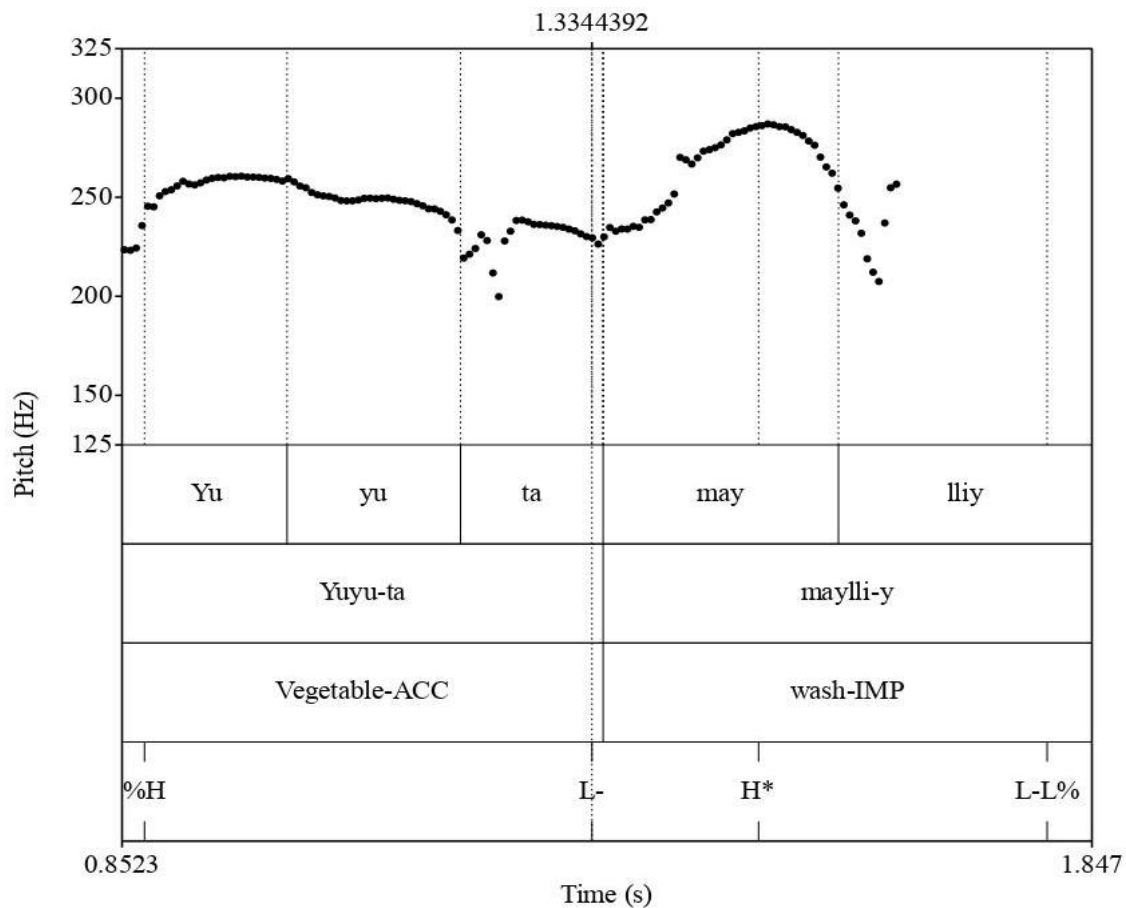


Figure 16: (S) – O – V(IMP)

Prosodic Structure Analysis:

- **Pitch Alignment:** The verb receives primary prosodic prominence with an H* pitch accent, while the object is deaccented and marked by a low intermediate phrase tone.
- **Prominence Shift:** The imperative verb serves as the focal point of the utterance, in contrast to declarative sentences where the verb is typically deaccented.
- **Imperative Intonation:** The final boundary tone (L-L%) signals utterance closure and is consistent with the falling contour found in commands.

This prosodic alignment suggests that in imperative O–V.IMP constructions, Kichwa assigns primary prosodic prominence to the verb, highlighting its communicative force. The verb's agreement morphology indicates a second person subject, supporting the analysis that imperative structures in Kichwa may rely on verbal morphology rather than syntactic subjects to signal agency.

4.2 S - INST.P - V (IMP)

In imperative sentences following the S - Instrumental Phrase (INST.P) - V (IMP) structure, the imperative verb receives the highest pitch prominence. This pattern suggests that prosodic focus shifts to the V+IMP, reinforcing its role as the prosodic nucleus.

18)

Warmita wirawan yanapay.
[warmita] [wirawan] [yanapay].
3.S 3.INST.P 4.V
Warmi-ta wira-wan yanapa-y.
Woman-ACC oil-INST help-IMP
'Help the woman with the oil.'

Context Analysis:

This imperative sentence directs the listener to assist a woman using oil or carrying oil containers. The subject “warmi-ta” (‘woman-ACC’) is the recipient of help, while “wira-wan” (‘with oil’) specifies the means or instrument. The verb “yanapay” is in the imperative form, indicating a second-person command. This construction likely occurs in practical or caregiving contexts—such as cooking, cleaning, or health care—where help is needed and the method is explicitly stated. The sentence is clear, direct, and instructional.

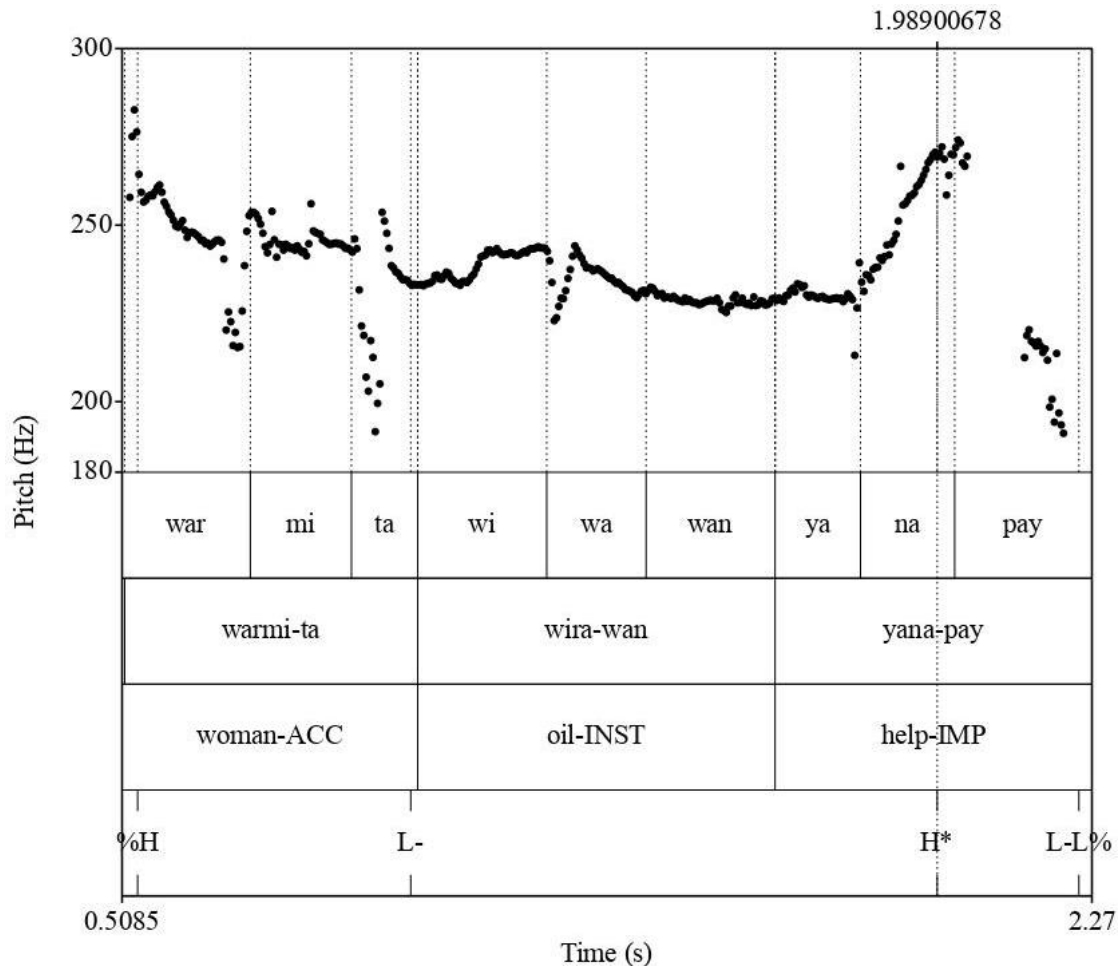


Figure 17: S – INST.P – V (IMP)

Prosodic Structure Analysis:

- **Pitch Alignment:** The instrumental phrase receives primary prosodic stress, while the subject and verb remain flat.
- **Prominence Shift:** The instrumental phrase serves as the focal point, emphasizing the means by which the action is performed.
- **Imperative Intonation:** The final boundary tone (L%) signals phrase closure, following the expected contour for Kichwa imperative sentences.

This prosodic alignment suggests that in S -O- INST.P – V (IMP) constructions, Kichwa assigns primary stress to the imperative verb. Meanwhile, the subject remains flat, and the instrumental phrase is deaccented, consistent with previous findings on Kichwa imperative sentence intonation.

4.3 (S)- O – Adj+INST.P – V (IMP)

19)

Marata yana ruwanawan minkaway
 [Marata] [yana ruwanawan] [minkaway]
 3.O 2.Adj 4.INST.P 3.IMP
 Mara-ta yana ruwana-wan minka-way
 kid-ACC black poncho-INST keep-2SG.IMP
'Keep the kid with the black poncho'

Context Analysis:

This imperative sentence instructs the listener to keep or care for a specific child, identified by their clothing: "yana ruwana" ('black poncho'). The instrumental phrase "ruwanawan" highlights how the child is visually distinguished, aiding the listener in identifying them. The verb "minkaway" includes the polite imperative suffix -way, softening the command and signaling respectful or gentle tone. This utterance would likely be used in caregiving or supervisory contexts where precise identification and polite address are important.

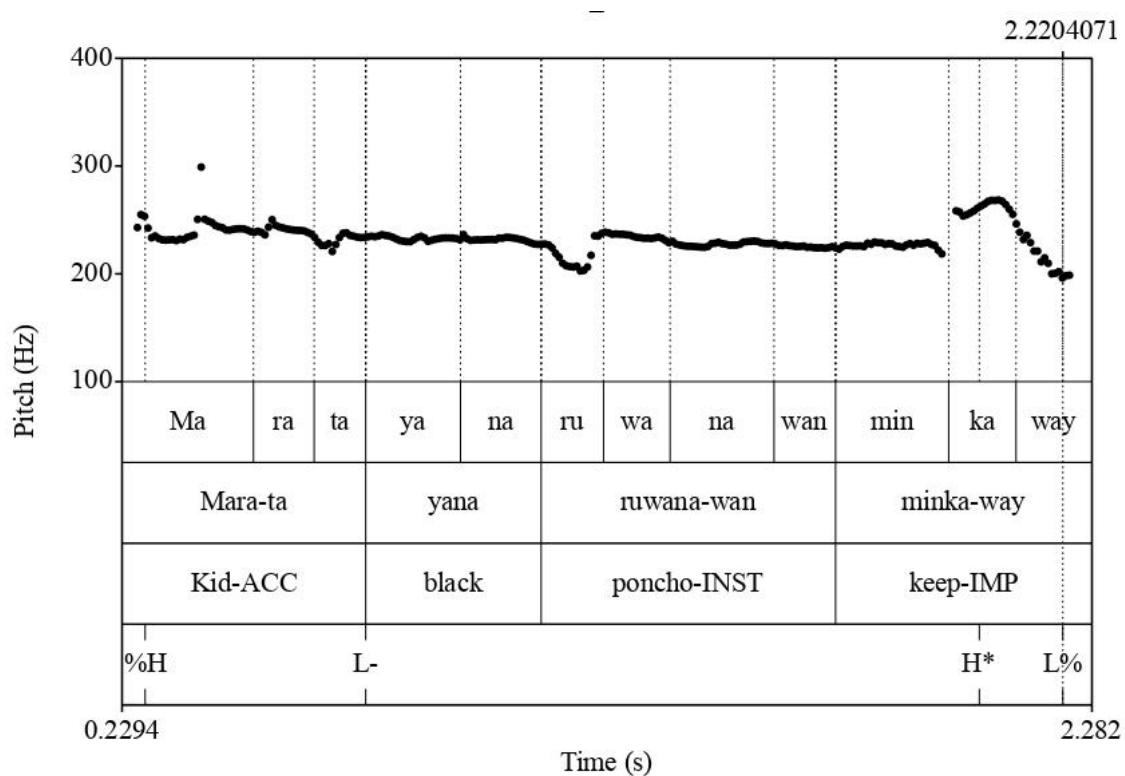


Figure 18: (S)- O - Adj+INST.P - V(IMP)

Prosodic Structure Analysis:

- **Pitch Alignment:** The imperative verb *minka-way* receives primary prosodic prominence (H*), while the object and the adjective + instrumental phrase show reduced pitch movement.
- **Prominence Shift:** Prosodic focus is assigned to the verb, aligning with the command function. The instrumental phrase and object are deaccented, indicating their secondary role in the prosodic hierarchy.
- **Imperative Intonation:** The sentence begins with a high boundary tone (%H), transitions to L- after the object, and ends with a sharp fall (L-L%), aligning with the expected contour for imperatives.

Subject Inference: Although no overt subject is present, the verb's morphology (-way) encodes second person singular, indicating the addressee is the implied subject.

This prosodic alignment reinforces that in imperative constructions, Kichwa places the nuclear pitch accent on the verb, even when the object and instrumental phrases are present. This supports the view that the verb is the prosodic nucleus in imperative utterances, with subject information recoverable through verbal morphology.

4.4 (S) - Adj+O - INST.P - V (IMP)

20)

Maywa wamanta rinrinwan uyaway
 [Maywa wamanta] [rinrin-wan] [uyaway]
 2.Adj 3.O 3.INST.P 3.IMP
 Maywa waman-ta rinrin-wan uya-way
 Purple hawk-OBJ ears-INST listen-IMP
 ‘Listen to the purple hawk with your ears’

Context Analysis:

This imperative sentence urges the listener to **listen to the purple hawk**, specifying the manner of action through the instrumental phrase "**rinriwan**" ('with ears'). The object "**maywa wamanta**" ('purple hawk-ACC') is both animate and descriptively marked, indicating a specific referent within the discourse. The use of **-way** on "**uyaway**" reflects a polite imperative, common in contexts that involve teaching, storytelling, or respectful instruction. The utterance emphasizes attentiveness and perception, potentially in a ceremonial, educational, or observational setting.

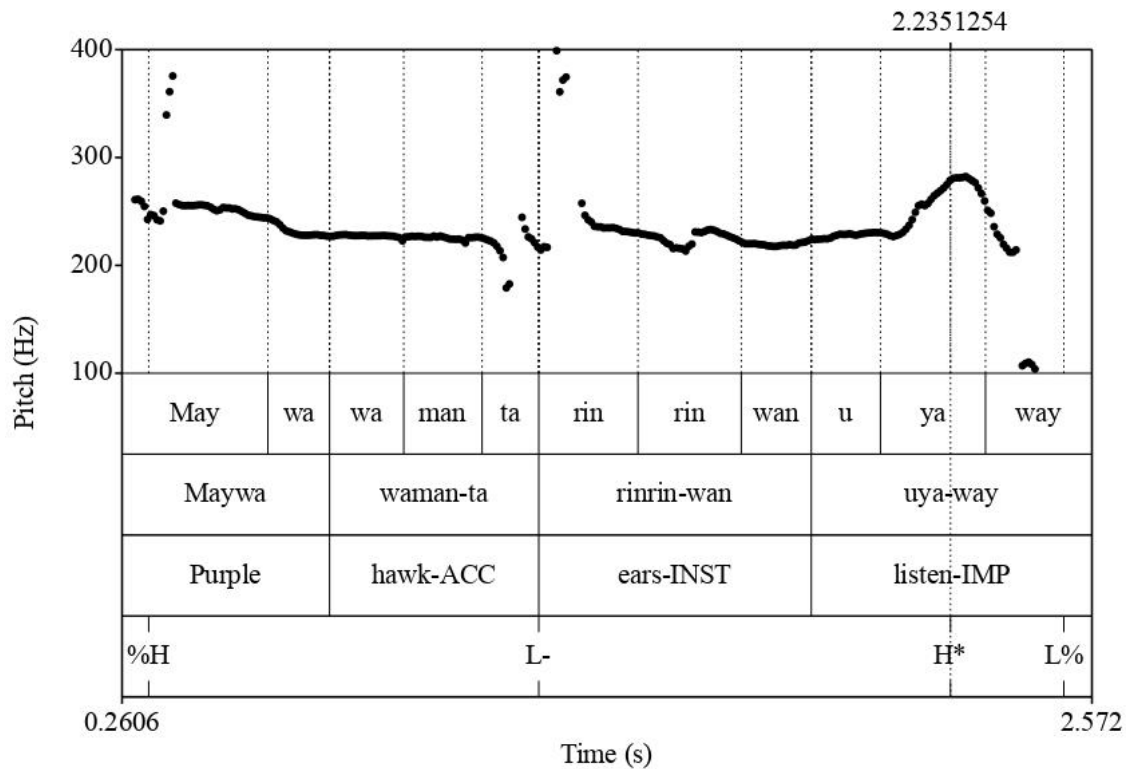


Figure 19: (S) - Adj+O - INST.P - V (IMP)

Prosodic Structure Analysis:

- **Prominent Word:** The highest pitch is realized on the imperative verb **"uyaway"** ('listen'), specifically on the **"ya"** syllable, emphasizing the command force of the utterance.
- **Intonational Characteristics:** The utterance begins with a high boundary tone (%H), gradually declines across the object phrase, and has a slight reset before rising sharply on the verb. The pitch peak aligns with the verb, and the contour closes with a falling L-L%, characteristic of declarative and imperative intonation in Kichwa.

ToBI-style Analysis

- %H — on **"Maywa"**
- L- — after the object phrase **"maywa wamanta"**
- L+H* — rise culminating on **"ya"** in **"uyaway"**
- L-L% — low boundary tone on **"-way"**, signaling the end of the imperative utterance.

4.5 (S) - Adj+O - Adj+INST.P - V (IMP)

21)

Yana muruta waminsu umawan yuyariway
 [Yana muruta] [waminsu umawan] [yuyariway]
 Yana muru-ta waminsu uma-wan yuyari-way
 Black fruit-ACC pink head-INST remember-IMP
 'Remember the black fruit with your pink head'

Context Analysis:

This imperative sentence combines vivid imagery with a command: the speaker instructs someone to **remember the black fruit**, using their **pink head** as the means—likely a humorous, metaphorical, or poetic expression. The instrumental phrase **"waminsu umawan"** ('with pink head') adds descriptive flair and may reflect playful or expressive language. This utterance could appear in poetic, educational, or culturally stylized discourse, where memory and visualization are emphasized creatively.

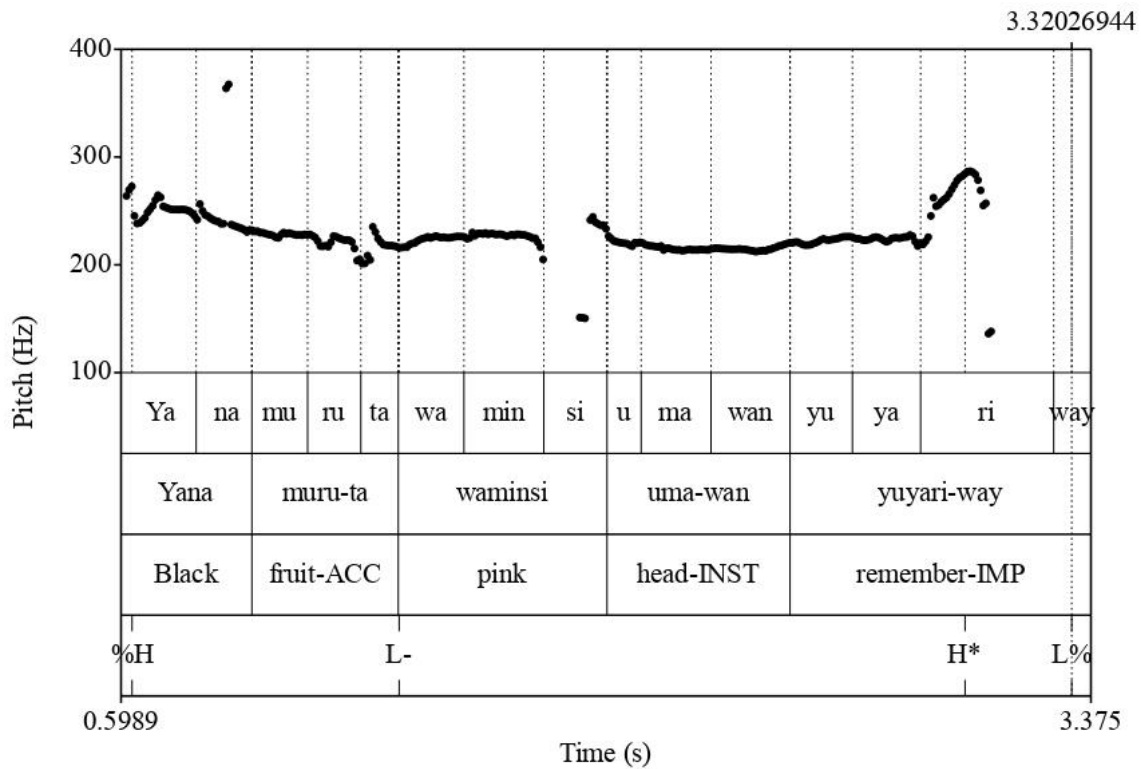


Figure 20: (S) - Adj+O - Adj+INST.P - V (IMP)

Prosodic Structure Analysis:

- **Prominent Word:** The highest pitch is realized on the imperative verb **"yuyariway"** ('remember'), specifically on **"ri"**, signaling the focal point and command force of the utterance.

- **Intonational Characteristics:** The utterance begins with a high boundary tone (%H), followed by a gradual descent through the object and instrumental phrases. The pitch rises sharply at the verb (H*), then concludes with a declarative low boundary (L-L%)—a pattern typical of imperative constructions in Kichwa.

ToBI-style Analysis

- %H — on "Yana"
- L- — after the object phrase "yana muruta"
- H* — aligned with "ri" in "yuyariway"
- L-L% — final boundary on "way"

The nucleus of prominence is on the verb, emphasizing the action “remember” rather than the means or object. This suggests a more affective or directive focus, reinforcing the imperative mood with a solemn, downward pitch pattern.

Summary of Findings

Imperatives in Kichwa Prosody

This chapter has shown that imperative constructions in Kichwa exhibit a core prosodic pattern in which nuclear pitch prominence consistently falls on the verb. This alignment reflects the communicative priority of the verb in directive speech acts and holds across both simple and more complex structures. However, a key finding is that while the verb reliably attracts the highest pitch (H*), additional prosodic peaks may emerge in certain configurations—particularly those involving complex instrumental phrases or adjectival modifiers. In these cases, a secondary prominence may be realized on an instrumental noun or an emphasized adjective, reflecting a layering of focus or contrastive interpretation.

This prosodic flexibility highlights how the Kichwa intonational system is sensitive not only to clause structure but also to pragmatic nuance. The emergence of secondary pitch accents in imperatives marks a departure from the more rigid prosodic pattern seen in declaratives, revealing an interaction between prosody and the expressive goals of the speaker. This suggests that, in addition to marking information structure, Kichwa pitch patterns in imperatives may serve to enhance clarity, emphasize the means or manner of an action, or introduce subtle contrasts, an area that merits further investigation.

Section 5

Adverbs

This chapter explores the prosodic and syntactic behavior of **adverbs in Kichwa**, with a focus on four primary semantic categories: **manner**, **time**, **place**, and **quantity**. Each group contributes uniquely to the structure and interpretation of an utterance, and understanding their interaction is essential for a comprehensive analysis of Kichwa clause structure. We begin by identifying and exemplifying adverbs from each category. Following this, we analyze how these adverbs function both independently and in combination within complete utterances. The goal is to observe not only their positional flexibility and syntactic patterns, but also their **intonational features**—such as pitch prominence and prosodic boundaries—when appearing in multi-adverbial contexts. Through this, the aim is to reveal how Kichwa speakers construct meaning through layered adverbial elements, and how prosody interacts with grammatical structure in conveying temporal, spatial, modal, and quantitative nuances.

5.1 Adverbs of Manner: Expressing How Actions Are Performed in Kichwa

In sentences following the S - Adverb - V structure with adverbs of manners, the adverb receives prosodic prominence, with the highest pitch aligning with their penultimate syllables.

22)

Hampatupi yuyin rantinki
[Hampatupi] [yuyin randinki]
4.S 2.Adv 3.V
Hampatu-pi yuyin ranti-nki
Ambato-LOC carefully buy-2SG
'Make the shopping in Ambato carefully'

Context Analysis:

This sentence gives an instruction or advice framed as a declarative, telling someone to buy carefully in Ambato. The locative adverb "hambatupi" ('in Ambato') sets the spatial context, while "yuyin" ('carefully') expresses manner. The verb "randinki" ('you buy') indicates second person singular agreement.

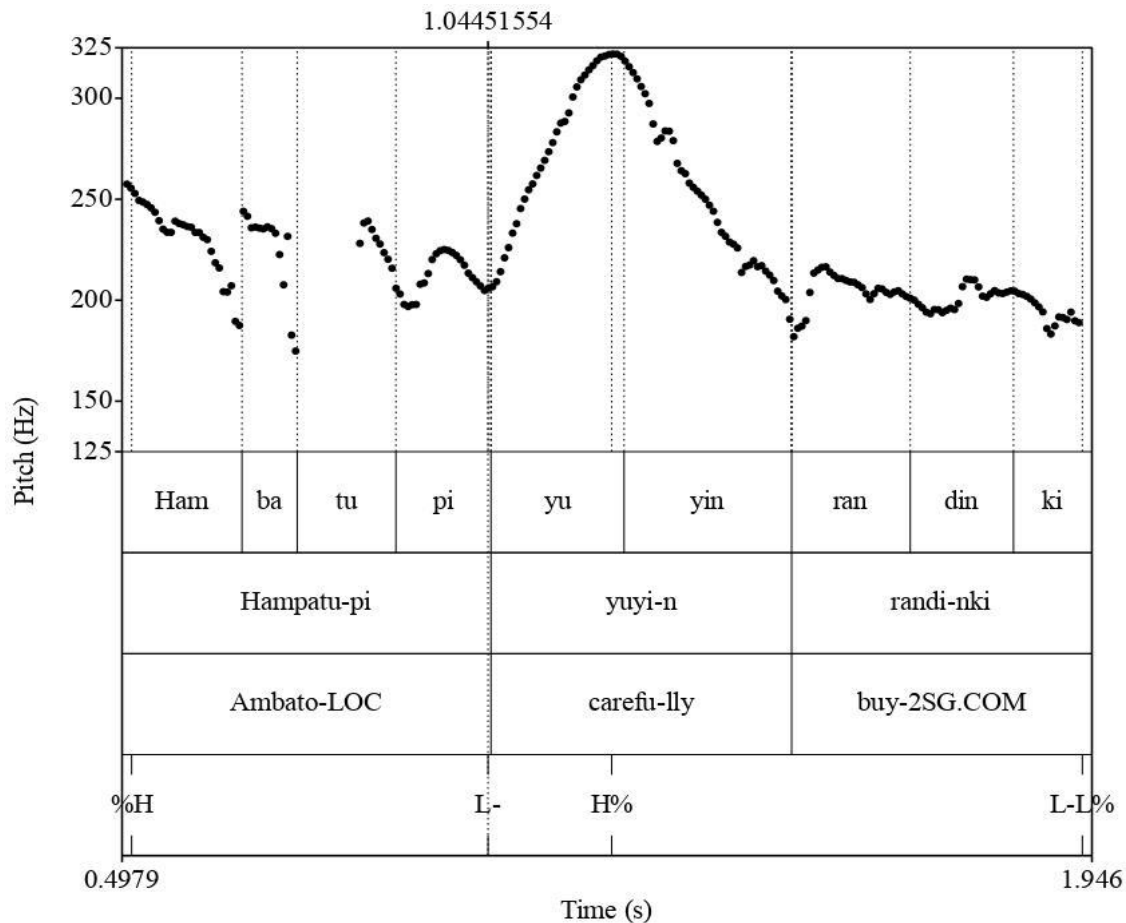


Figure 21: AdvManner

Prosodic Structure Analysis:

- **Pitch Alignment:** The adverb receives primary prosodic stress, while the subject remains flat.
- **Prominence Shift:** The prosodic focus is shared on the adverb, reinforcing the role of manner adverbs in modifying the action.
- **Declarative Intonation:** The final boundary tone (L%) signals phrase closure, following the expected contour for Kichwa declaratives.

This prosodic alignment suggests that in S - Adv - V constructions, Kichwa assigns primary stress to the adverb. Meanwhile, the subject remains deaccented, consistent with previous findings on Kichwa declarative sentence intonation.

5.2 Adverbs of Time: Locating Events Within Temporal Frames

23)

Kayna Wamunlumaman rirkanchi
 [Kayna] [Wamunlumaman] [rirkanchi]
 2.Adv 5.LOC 3.V
 Kayna Wamunluma-man ri-rka-nchi
 Yesterday Wamunluma-DIR go-PST.1PL
 'We went to Wamunluma yesterday.'

Context Analysis:

This sentence recounts a past event, stating that the speaker and others went to Wamunluma yesterday. The temporal adverb "kayna" ('yesterday') situates the event in the recent past, while "Wamunlumaman" ('to Wamunluma') provides the destination. The verb "rirkanchik" is in the past tense and agrees with a first-person plural subject, indicating a shared action. This utterance is typical in conversational or narrative contexts, used to report or recall past group activities involving movement or travel.

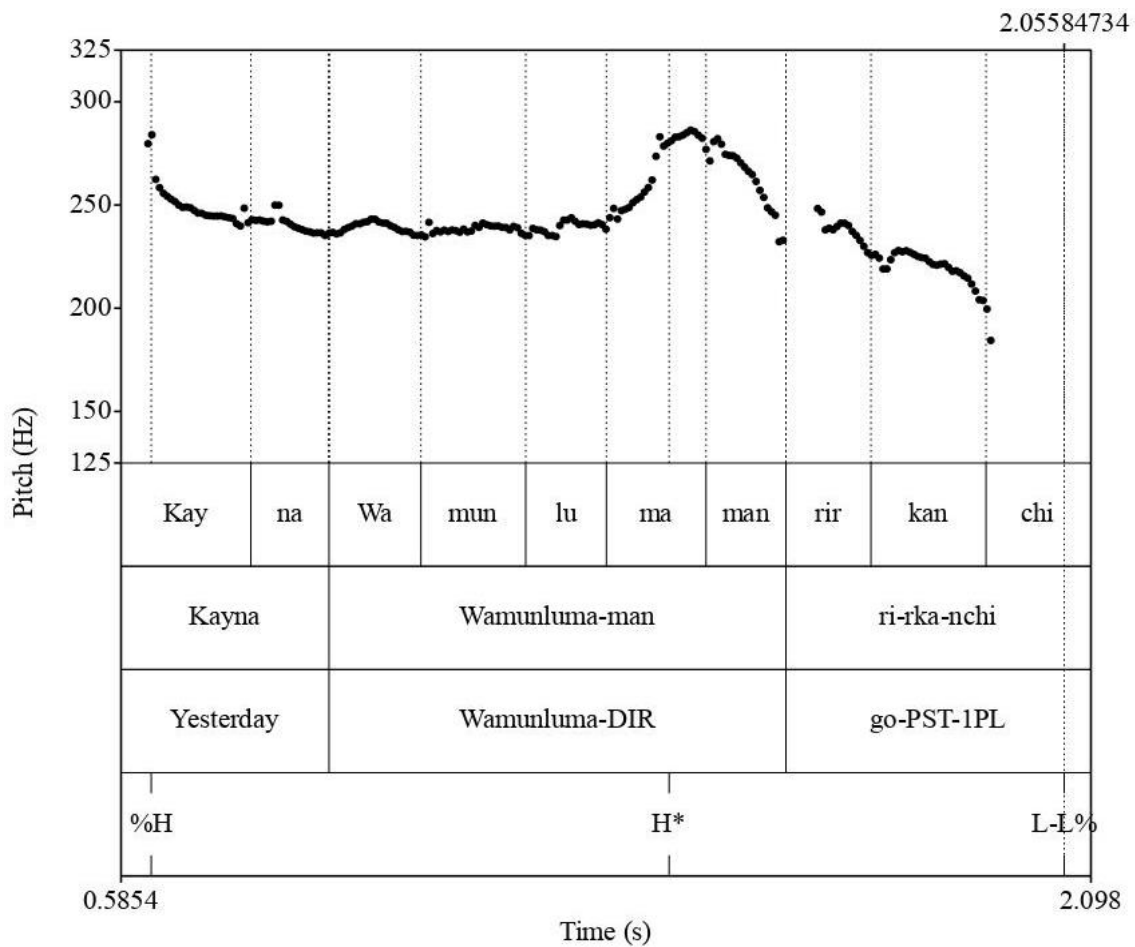


Figure 22: AdvTime

Prosodic Structure Analysis:

- **Pitch Alignment:** The locative phrase *Wamunlumaman* receives the nuclear pitch accent (H*), while the adverbial and the verb are deaccented.
- **Prominence Shift:** Despite appearing sentence-initially, the temporal adverb does not receive prosodic focus. Instead, prominence falls on the **locative expression**, suggesting it serves as the informational nucleus in this utterance.
- **Declarative Intonation:** The sentence opens with a high boundary tone (%H), includes a nuclear pitch accent (H*) on the locative phrase, and concludes with a low boundary (L-L%), marking it clearly as a declarative sentence.

This analysis supports the observation that in Kichwa declaratives, pitch prominence tends to fall on location or object phrases over time adverbials, and the verb typically shows deaccentuation, even when it carries key grammatical information like subject agreement.

5.3 Adverbs of Place: Encoding Spatial Relations in Kichwa Utterances

24)

Wiwaka uraypi muyurihun.
 [Wiwaka] [uraypi] [muyurihun]
 3.S 3.LOC 4.V
 Wiwa-ka uray-pi muyuri-hun
 Animal-TOP down there-LOC moving in circle-PRG.3SL
 ‘The animal is moving in circles down there.’

Context Analysis:

This sentence describes an ongoing action involving an animal, stating that “**the animal is moving in circles down there.**” The subject “**Wiwaka**” is topicalized, indicating it is known or prominent in the discourse. The locative adverb “**uraypi**” (‘down there’) specifies the spatial setting of the action, while the progressive verb “**muyurihun**” conveys continuous motion. This utterance fits descriptive or observational contexts, such as storytelling, reporting, or real-time commentary on animal behavior.

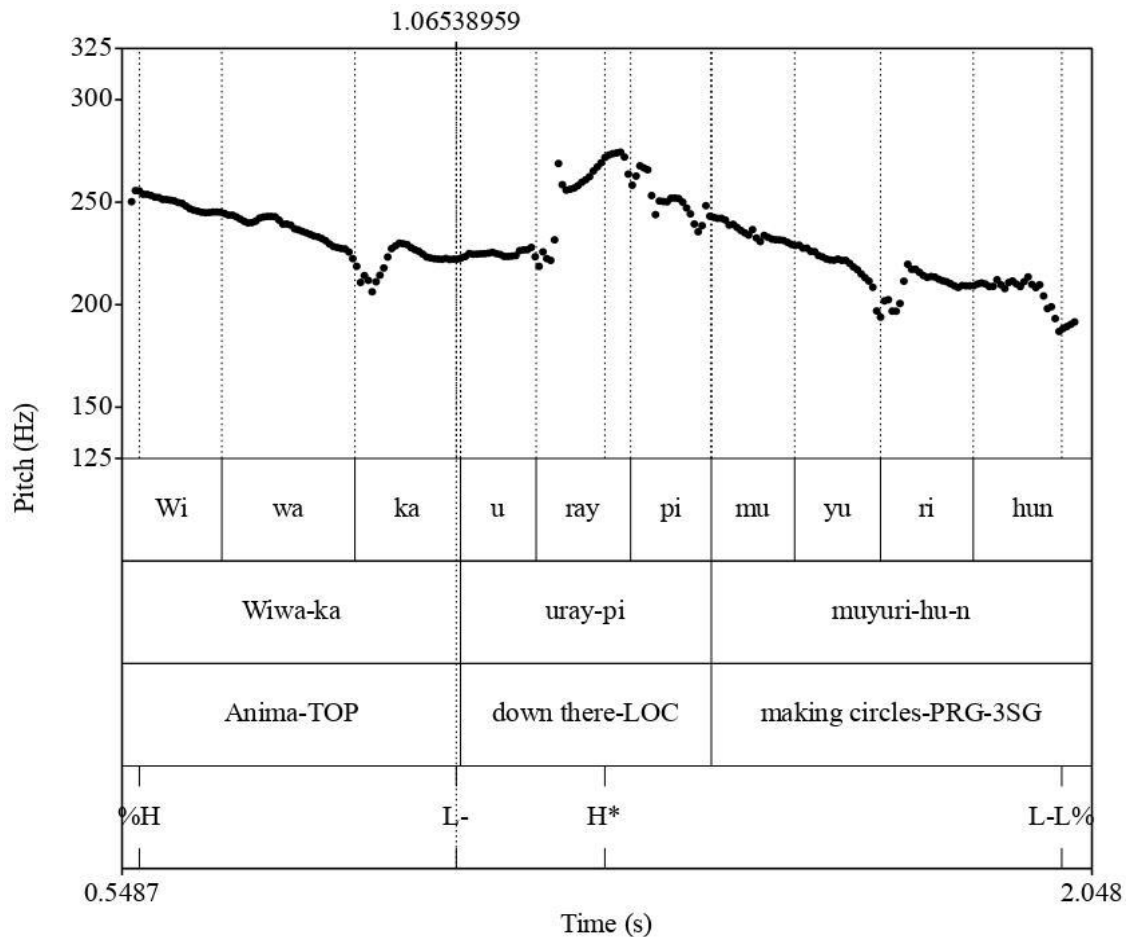


Figure 23: AdvPlace

Prosodic Structure Analysis:

- **Prominent Word:** The locative adverb "**uraypi**" ('down there') receives the pitch peak (**H***), marking it as the prosodic focus of the utterance.
- **Intonational Characteristics:** The utterance begins with a high boundary tone (**%H**), followed by a slight decline and a low phrase accent (**L-**) after the topicalized subject "**wiwaka**". The pitch then rises sharply on the locative "**uraypi**" and falls steadily through the verb "**muyurihun**", concluding with a low boundary (**L-L%**) consistent with declarative contours.

ToBI-style Analysis

- **%H** — on "**Wiwaka**"
- **L-** — after the subject
- **H*** — on "**ray**" of "**uraypi**"
- **L-L%** — on "**hun**" of "**muyurihun**"

This example further supports the pattern that **spatial adverbs** frequently receive prosodic prominence in Kichwa, especially when they introduce new or focused locative information.

5.4 Adverbs of Quantity: Expressing Amount and Scope in Kichwa

25)

Mamaka mancha tzawarta upirka.
[Mamaka] [mancha tzawarta] [upirka].
3.S 2.Adv 3.ACC 3.V
Mama-ka mancha tzawar-ta upi-rka
Mother-TOP a lot water-ACC drink-PST-3SG
'My mom drank a lot of tzawar.'

Context Analysis:

This sentence describes a past event where **the mother** (**mamaka**) drank a large amount of **tzawar** (a traditional drink or water). The adverb "**mancha**" ('a lot') quantifies the direct object "**tzawarta**", emphasizing the volume consumed. The use of the topic marker **-ka** on the subject highlights the mother as the known or foregrounded participant. This type of utterance is typical in narratives, casual conversation, or commentary about someone's behavior, habits, or health.

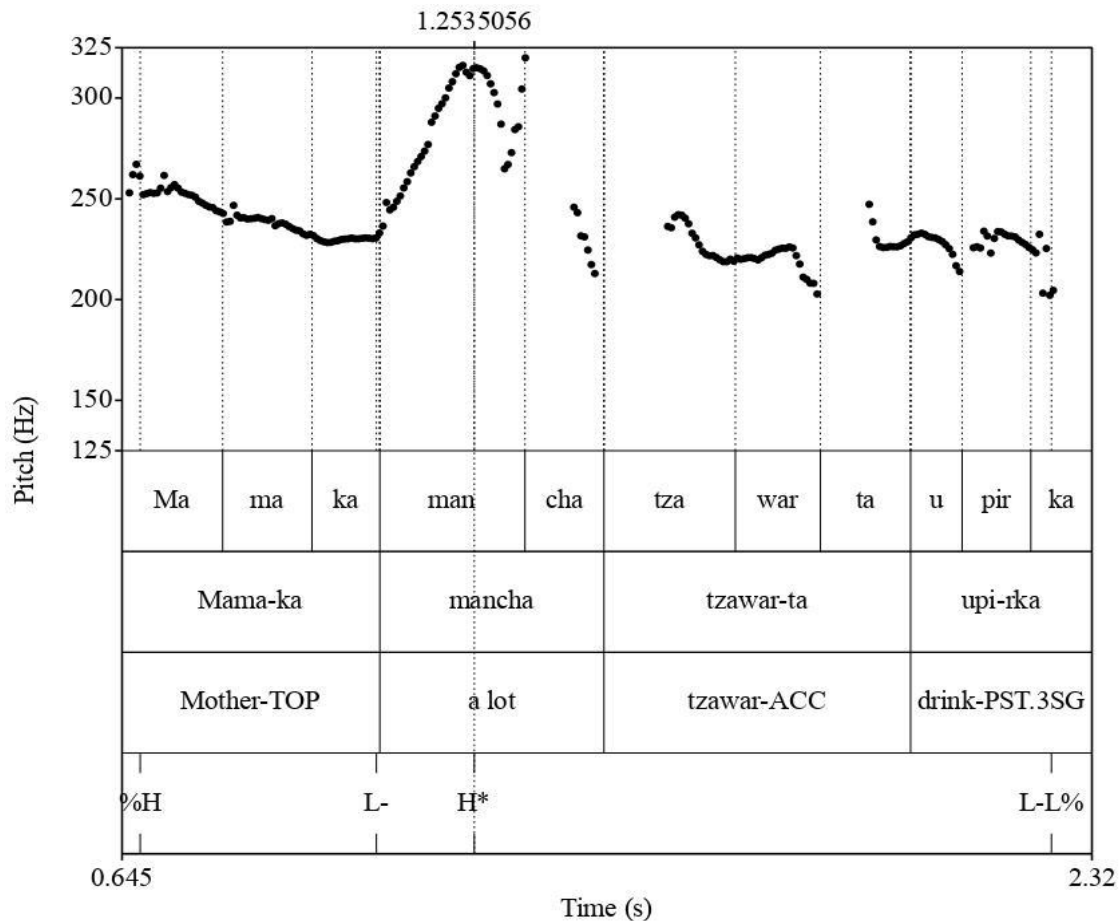


Figure 24: AdvQuant

Prosodic Structure Analysis:

- **Pitch Alignment:** The adverb *mancha* carries the nuclear pitch accent (H*), indicating its role as the prosodic nucleus.
- **Prominence Focus:** The adverb of quantity is not only semantically focal (expressing scope), but also prosodically marked, contrasting with temporal adverbs like *kayna*, which remain deaccented.
- **Declarative Intonation:** The sentence opens with %H, features H* on the adverb, and ends with L-L%, matching the intonational contour expected in neutral declaratives.

ToBI-style Analysis

- %H — on "Mamaka"
- L- — after the subject
- H* — on "mancha"
- L-L% — on "upirka"

5.5 Multiple Adverbs in Utterance: Interaction, Ordering, and Prosodic Integration

26)

Wawakuna washapi ñallami yanunkakuna
 [Wawakuna] [washapi] [ñallami] [yanunkakuna]
 4.S 3.AdvPlace 3.AdvTime 5.V
 Wawakuna washa-pi ñalla-mi yanunkakuna
 Kid-PL outside-LOC soon-FOC cook-FUT-3PL
'The kids will cook outside soon.'

Context Analysis:

This sentence predicts a near-future event: a group of children will cook outside soon. The subject "wawakuna" ('kids') is plural and unmarked, while the adverbial sequence "washapi ñallami" combines spatial and temporal information—indicating both where and when the event will happen. The time adverb "ñallami" includes the focus marker -mi, emphasizing immediacy. This type of utterance fits well in narrative, instructional, or planning contexts, highlighting the relevance of both time and place to the upcoming action.

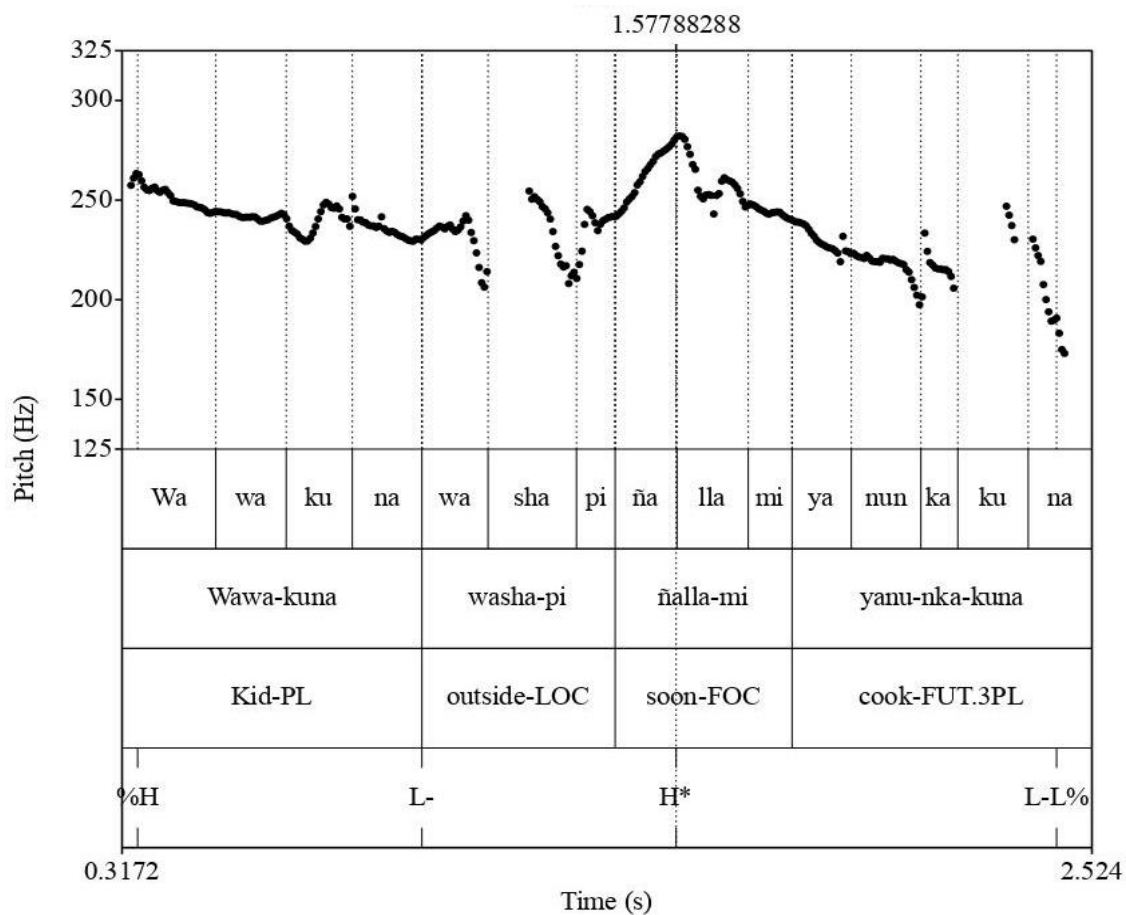


Figure 25: MultipleAdv

Prosodic Structure Analysis:

- **Prominent Word:** The pitch peak aligns with the temporal adverb *ñallami* (‘soon’), which also bears the focus marker *-mi*, reinforcing its role as the prosodic and informational focus of the utterance.
- **Intonational Characteristics:** The contour follows the expected declarative pattern in Kichwa: it begins with a high boundary tone (%H), drops slightly with a low phrase accent (L-) after the subject and the locative adverb *washapi*, then rises to a pitch peak (H*) on the antepenultimate syllable of *ñallami*, and ends with a falling boundary (L-L%) across the verb phrase. The location of the pitch peak on the antepenultimate syllable aligns with prior observations that the focus particle *-mi* attracts prominence to the beginning of its host word, rather than to the default penultimate syllable.

ToBI-style Analysis

- %H — on "Wawakuna"
- L- — after "washapi"
- H* — on "ñalla" in "ñallami"²
- L-L% — on the final syllables of "yanunkakuna"

5.6 Summary of Findings

This chapter has examined the prosodic realization and structural role of adverbs in Kichwa declarative sentences, revealing a nuanced interaction between prosody, word order, and information structure. Through systematic analysis of adverbs of manner, time, place, and quantity, as well as constructions involving multiple adverbs, several consistent patterns emerge.

A central finding is that Kichwa tends to assign nuclear pitch prominence to the adverbial element that carries the most informational or pragmatic weight within the utterance. Adverbs of manner and quantity frequently bear the highest pitch peak (H*), serving as prosodic nuclei and signaling the speaker’s focus on how or how much an action is performed. In contrast, temporal adverbs, especially when sentence-initial, often set the frame for the utterance but remain prosodically backgrounded, with prominence shifting instead to locative phrases or

² While the focus marker *-mi* enhances the prominence of *ñalla*, prior data show that temporal adverbs like *ñalla* often attract the pitch peak even in the absence of *-mi*, indicating that temporal adverbs are naturally salient in this position.

other informationally focused elements. Locative adverbs and adverbial phrases commonly receive nuclear pitch accent when they introduce new, contrastive, or focal information.

When multiple adverbs co-occur, Kichwa prosody typically marks only one as prosodically prominent—the one that is pragmatically or contextually in focus—while others are deaccented, reflecting a principle of prosodic economy and focus hierarchy. The use of particles such as *-mi* further interacts with prosodic realization, overtly marking informational focus that is then mirrored in the pitch contour. Moreover, current evidence suggests that adverbial position in Kichwa is not rigidly fixed. While certain tendencies emerge (e.g., temporal adverbs appearing at the beginning of the sentence), the data reveal significant positional flexibility, and adverbs from different semantic categories or particular adverbs may surface in varying locations depending on discourse structure, focus, and prosodic integration.

Importantly, while this analysis identifies adverbial categories such as manner, time, place, and quantity, it is crucial to recognize that **adverbs in Kichwa are deeply rooted in the orality and pragmatic organization of discourse**. Their prosodic behavior may not strictly align with rigid grammatical categories, but rather reflects their dynamic functionality and communicative role in actual speech. Adverbs in Kichwa do not merely fill syntactic slots—they actively structure discourse, signal speaker intent, and manage information flow, often functioning as pivots of narrative or emphasis within oral storytelling and conversation.

As such, the findings here are best seen not as a definitive categorization of adverb types, but as a window into how Kichwa speakers use prosody to highlight, background, or structure meaning through adverbials in real-world communication. These insights underscore the importance of considering both prosodic and pragmatic dimensions when analyzing Kichwa adverbials, and they invite further exploration of how these patterns operate in narrative, conversational, and ritual contexts.

Section 6

6.1 Multiple adjectives

This chapter investigates the prosodic and syntactic behavior of multiple adjectives in Kichwa noun phrases. Building on earlier findings from Section 2.5, where we analyzed branching objects and observed that prosodic prominence tends to align with the final element of the noun phrase, this section explores how Kichwa speakers manage sequences of stacked adjectives. We examine whether all adjectives are prosodically equal or whether one attracts nuclear pitch accent, and how the ordering of adjectives reflects semantic hierarchy or focus.

In doing so, we aim to uncover how descriptive richness, contrast, and informational weight are encoded through both syntactic positioning and intonational cues, contributing to a deeper understanding of how complex nominal expressions are shaped prosodically in Kichwa.

Prosodic Pattern in Declarative Sentences with Two Adjectives

S - Adj1 - Adj2 - O - V Sentence Structure in Kichwa

In declarative sentences where the structure follows S - Adj1 - Adj2 - N - V, both adjectives receive prosodic prominence, with the highest pitch aligning with the penultimate syllable of the first adjective. The second adjective carries a secondary prominence but does not reach the same pitch height as the first. The noun remains prosodically neutral, and the verb exhibits a final boundary tone (L%), marking phrase closure.

27)

Wampra ñaño maywa ruwana-ta ranti-n.
[Wampra] [ñaño [maywa ruwana-ta]] [ranti-n].
2.S 2.Adj 2.Adj 4.O 2.V
Wampra ñaño maywa ruana-ta ranti-n.
boy slim purple poncho-ACC buy-3SG
'The boy bought a slim purple poncho.'

Context Analysis:

This sentence describes a past event where a boy (wampra) bought a poncho that is both slim (ñaño) and purple(maywa). The two adjectives appear stacked before the noun "ruwana", forming a complex noun phrase. This structure reflects a typical adjectival stacking pattern in Kichwa, where multiple modifiers precede the noun.

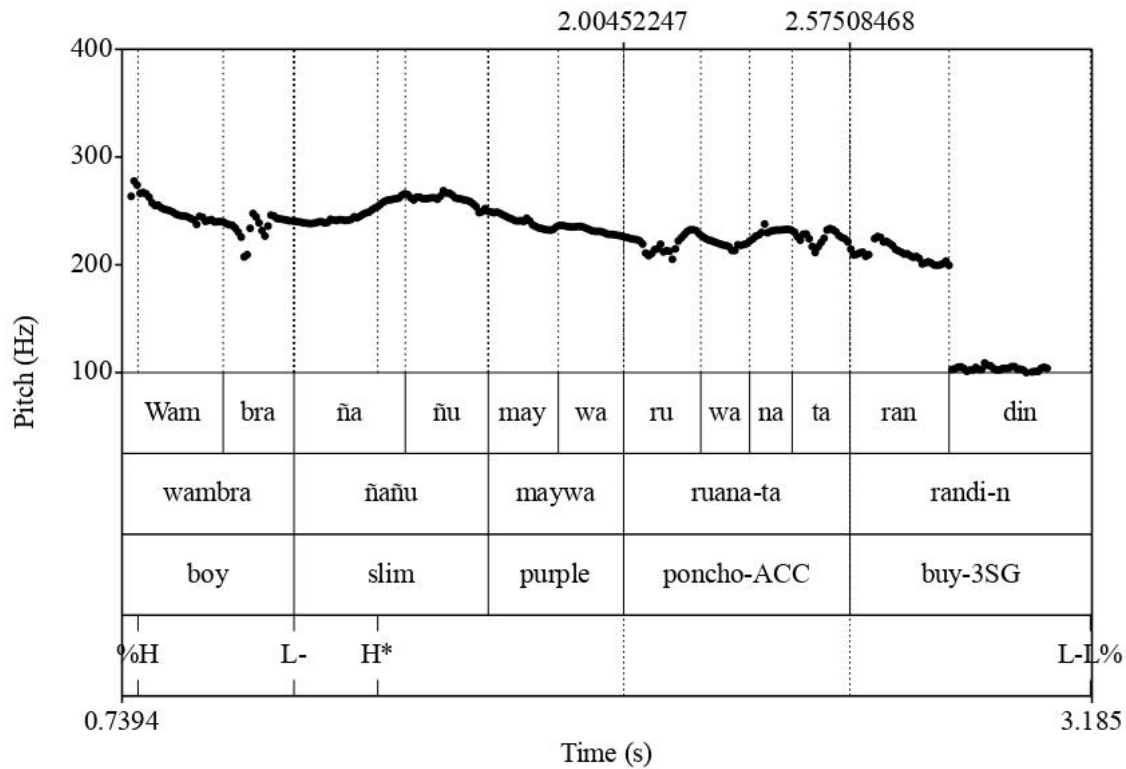


Figure 26:S-2Adj-O-V

Prosodic Structure Analysis:

- **Pitch Alignment:** The **first adjective** receives the highest prominence (H*), while the noun remains flat.
- **Prominence Shift:** The **first adjective is the focal element**, while the second adjective is prosodically **subordinate**.
- **Declarative Intonation:** The **final boundary tone (L%)** signals phrase closure, aligning with expected **Kichwa declarative intonation**.

This sentence shows that in two-adjective constructions, the first adjective (*ñañu* ‘slim’) receives the nuclear pitch accent (H*), consistent with the pattern observed in S[Adj.O]V structures, where prominence typically falls on the adjective modifying the object. This supports the idea that adjectival modifiers in Kichwa commonly receive pitch prominence. While this example involves two stacked adjectives, we do not yet have evidence of variable placement of prominence within such stacks, so further data would be needed to determine whether prosodic focus in these cases is flexible or consistently left-aligned.

S - Adj1 - Adj2 - Adj3 - N - V Sentence Structure in Kichwa

Prosodic Pattern in Declarative Sentences with Three Adjectives

In declarative sentences where the structure follows S - Adj1 - Adj2 - Adj3 - N - V, the **first adjective receives the highest prosodic prominence (H*)*, marking it as the primary focus in the sequence. The second and third adjectives exhibit reduced prominence, forming a descending pitch hierarchy. The noun remains prosodically neutral, and the verb exhibits a final boundary tone (L%), marking phrase closure.

28)

Mama ñawpa hatun maywa yura-ta akllan.

[Mama] [ñawpa [hatun [maywa yura-ta]]] [aklla-n].

2.S 2.Adj 2.Adj 2.Adj 3.O 2.V

Mama ñawpa hatun maywa yura-ta aklla-n.

mother old big purple tree-ACC choose-3SG

'The mother chose an old big purple tree.'

Context Analysis:

This sentence describes a selection event, where the mother (mama) chooses a tree that is described using three stacked adjectives: ñawpa ('old'), hatun ('big'), and maywa ('purple'). The object "maywa yura-ta" ('purple tree-ACC') is embedded within a richly modified noun phrase, highlighting the speaker's attention to the descriptive features of the referent. This utterance likely appears in a narrative or explanatory context where the specific characteristics of the chosen item are important to the discourse. The use of stacked adjectives offers an ideal structure for analyzing prosodic distribution and prominence in complex nominal expressions.

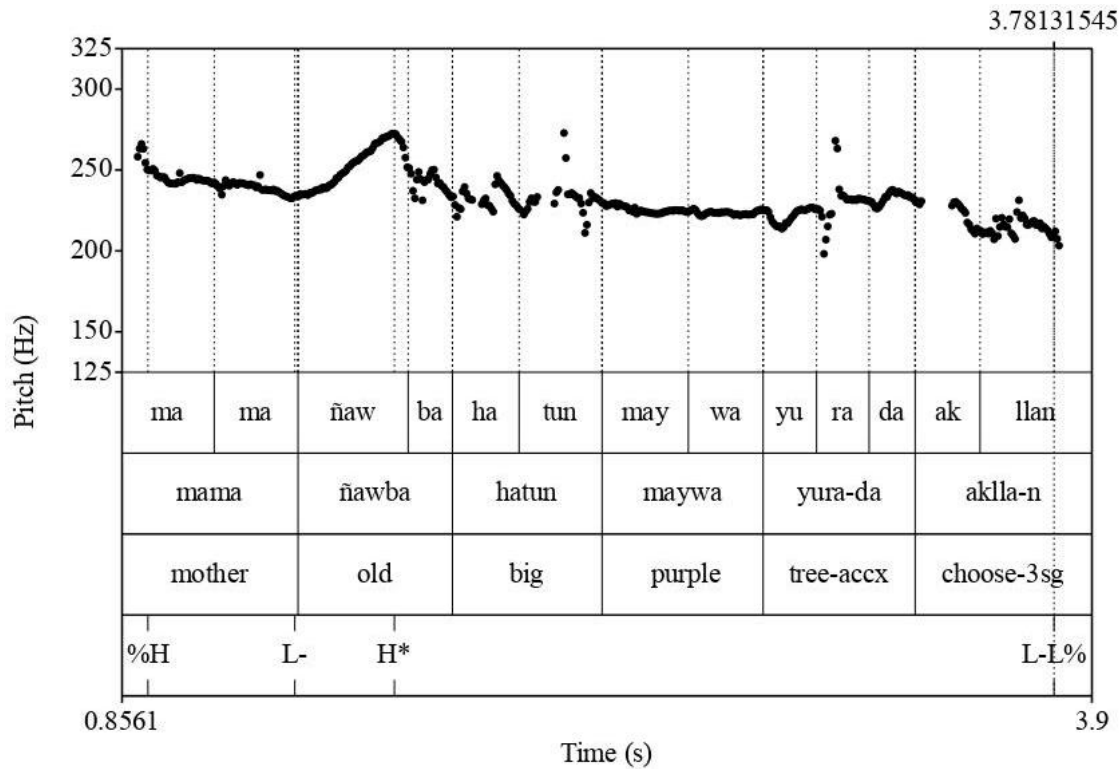


Figure 27: S-3Adj-O-V

Prosodic Structure Analysis:

- **Pitch Alignment:** The **first adjective receives the highest prominence (H)**, while the second and third adjectives carry reduced prosodic weight. The noun remains flat, and the verb follows a declarative boundary tone (L%).
- **Prominence Shift:** The descending pitch hierarchy across adjectives suggests a structured downgrade in prosodic weight as more adjectives are introduced.
- **Declarative Intonation:** The final low boundary tone (L%) confirms phrase closure, aligning with Kichwa declarative sentence prosody.

When three adjectives precede a noun in the object position (e.g., ñawba hatun maywa yura-da), the first adjective(ñawba, ‘old’) consistently receives the nuclear pitch accent (H*), while the subsequent adjectives (hatun, maywa) show a gradual decrease in prosodic prominence. The noun remains deaccented, and the verb closes the sentence with a low boundary tone (L-L%). This confirms a left-edge prominence hierarchy in multi-adjective noun phrases, where the initial modifier is prosodically focal regardless of the overall phrase length.

Summary of findings

Prosodic Patterns in Kichwa Sentences with One, Two, and Three Adjectives

The analysis of Kichwa declarative sentences with adjective stacking reveals a consistent and hierarchical prosodic pattern. Across constructions containing one, two, or three adjectives preceding the noun, the first adjective reliably receives the highest pitch prominence (H*), with subsequent adjectives exhibiting progressively reduced pitch levels.

This pattern suggests that prosody in adjective sequences is positionally driven, with prominence aligning with the leftmost element in the nominal or verbal phrase. While this may correlate with informational salience in natural discourse, the current data do not systematically manipulate information structure; therefore, the observed prosodic prominence is better attributed to syntactic position rather than discourse-driven focus.

Key Findings:

- **First Adjective Prominence:** The first adjective consistently bears nuclear pitch accent (H*), indicating its role as the focal modifier within the phrase.
- **Descending Hierarchy:** When more than one adjective is used, each additional adjective exhibits lower pitch prominence, forming a clear descending prosodic structure.
- **Stable Verb Prosody:** The verb maintains a consistent L-L% boundary tone, marking the end of the declarative utterance regardless of internal phrase complexity.

These findings show that Kichwa prosody interacts predictably with syntactic structure, assigning prominence based on modifier hierarchy rather than mere linear proximity to the noun. In both branching object constructions and adjective stacking, the leftmost modifier typically receives the pitch peak, suggesting that Kichwa exhibits a robust left-edge prominence system within complex noun phrases. This consistency across different constituent types highlights a unified prosodic strategy that distinguishes Kichwa from other languages where prosodic focus may be more variable or pragmatically driven.

6.2 More on Adjectives

This section expands on the prosodic behavior of adjectives in Kichwa declarative sentences, focusing on an exception to this natural adjective behavior which will be represented with the

adjective *khwilla* ('beautiful'), which appears to uniquely attract the nuclear pitch accent in certain contexts.

6.2. Exceptional Adjectives

In Kichwa, adjectives frequently receive the pitch peak in S-Adj+O-V configurations, where the leftmost modifier—typically an adjective—bears nuclear prominence. This pattern holds consistently across subject phrases, indirect objects, and instrumental phrases. For instance:

- *Wira mamachu millmata awan?*
→ Pitch peak on *mama*, not *wira*

We saw that the facts are different when an instrumental phrase is modified by an adjective. Here it is the instrumental noun itself, rather than the adjective, which bears nuclear prominence:

(16) *Wira mama waminsí arawíwan tushun*

[Wira mama] [waminsí arawíwan] [tushun]

2.Adj 2.S 3.Adj 4.INST.P 2.V

Wira mama waminsí arawí-wan tushu-n

curvy mother pink poem-INST dance-3SG

'The curvy mom dances with a pink poem'

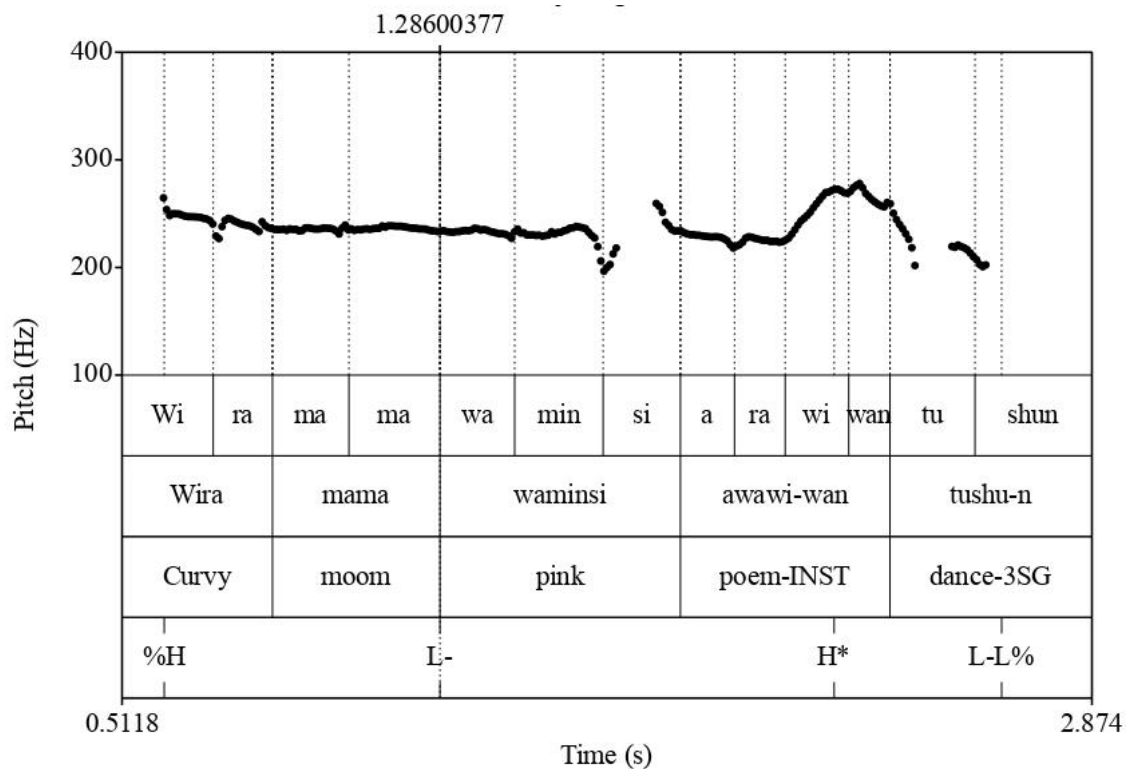


Figure 28: Adj+S - Adj+INST.P - V

However, some adjectives demonstrate exceptional prosodic behavior by attracting the pitch peak even in positions where prominence would otherwise fall on the noun or another constituent. One such adjective is *k^hwilla* ('beautiful'), which consistently receives the pitch peak regardless of its syntactic position:

29)

Wira mama k^hwilla arawiwān tushun
 [Wira mama] [k^hwilla arawiwān] [tushun]
 2.Adj 2.S 2.Adj 4.INST.P 2.V
 Wira mama k^hwilla arawī-wān tushu-n
 curvy mother beautiful poem-INST dance-3SG
 'The curvy mom dances with a beautiful poem'

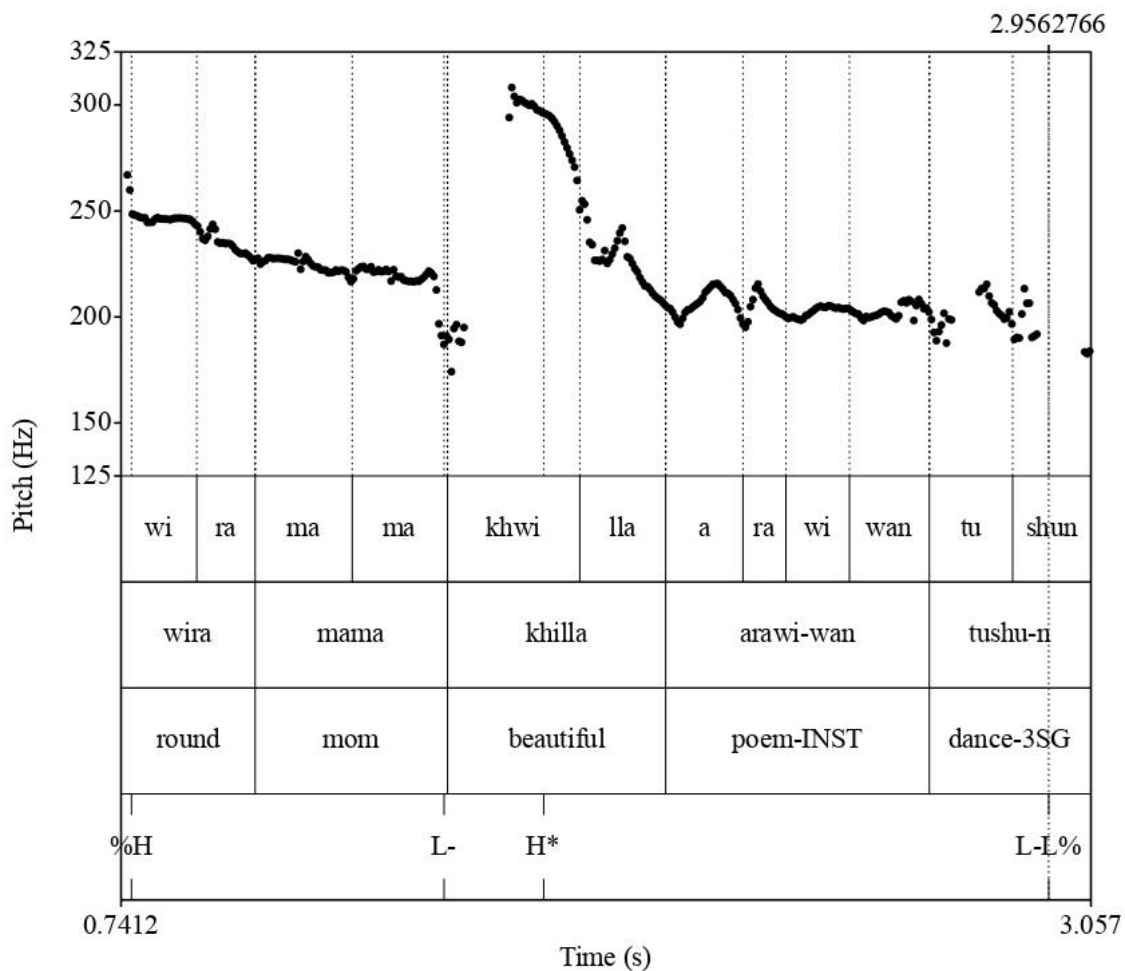


Figure 29: ExceptAdj

Prosodic Structure Analysis:

- %H (Initial High Boundary Tone):

The utterance begins with a high boundary tone at the left edge, aligned with the onset of the subject *wira mama* (‘round mom’), which shows a slightly declining pitch trajectory.

- L– (Low Phrase Accent): A low phrase accent follows, located just after *mama*. The pitch remains relatively low and flat across the subject, indicating deaccenting of the subject—consistent with the broader pattern in Salasaka Kichwa where subjects, even when modified, tend not to receive nuclear prominence.
- H (Nuclear Pitch Accent):* The highest pitch peak aligns with *k^hwilla* (‘beautiful’), suggesting that this adjective receives the nuclear pitch accent. This matches your earlier findings that *khwilla* is an exceptional adjective—it attracts prominence even in medial positions and overrides default patterns of left-edge prominence.
- **Post-nuclear Decline:** After the peak on *khwilla*, the pitch gradually declines across *arawiwān* (‘poem-INST’) and *tushun* (‘dance-3SG’), which do not show significant pitch movements. This is typical of post-nuclear deaccenting, where the elements following the H* are realized with reduced pitch variation.
- L-L% (Final Low Boundary): The utterance closes with a low boundary tone, creating the typical falling contour of a declarative sentence in Salasaka Kichwa.

This suggests that *k^hwilla* may have a special prosodic or semantic status, potentially due to its expressive or evaluative force. Unlike regular adjectives, which attract prominence only when syntactically licensed (e.g., sentence-initially), *k^hwilla* appears to override structural expectations and impose its own prosodic prominence.

Exceptional Prosodic Behavior in Adjective Sequences

Even in constructions involving multiple stacked adjectives, *k^hwilla* (‘beautiful’) continues to receive the highest pitch peak, regardless of its linear position. This stands in contrast to typical stacking patterns where the leftmost adjective (e.g., in three-adjective sequences) tends to receive prominence. For instance:

30)

Wira mama ñawpa k^hwilla yana arawiwān tushun

[Wira mama] [ñawpa k^hwilla yana arawiwān] [tushun]

2.Adj 2.S 2. Adj 2. Adj 2. Adj 4. INST.P 2.V

Wira mama ñawpa k^hwilla yana arawiwān tushun

Curvy mom old beautiful black poem-INST dance-3SG

'The curvy mother dances with the old beautiful black poem'

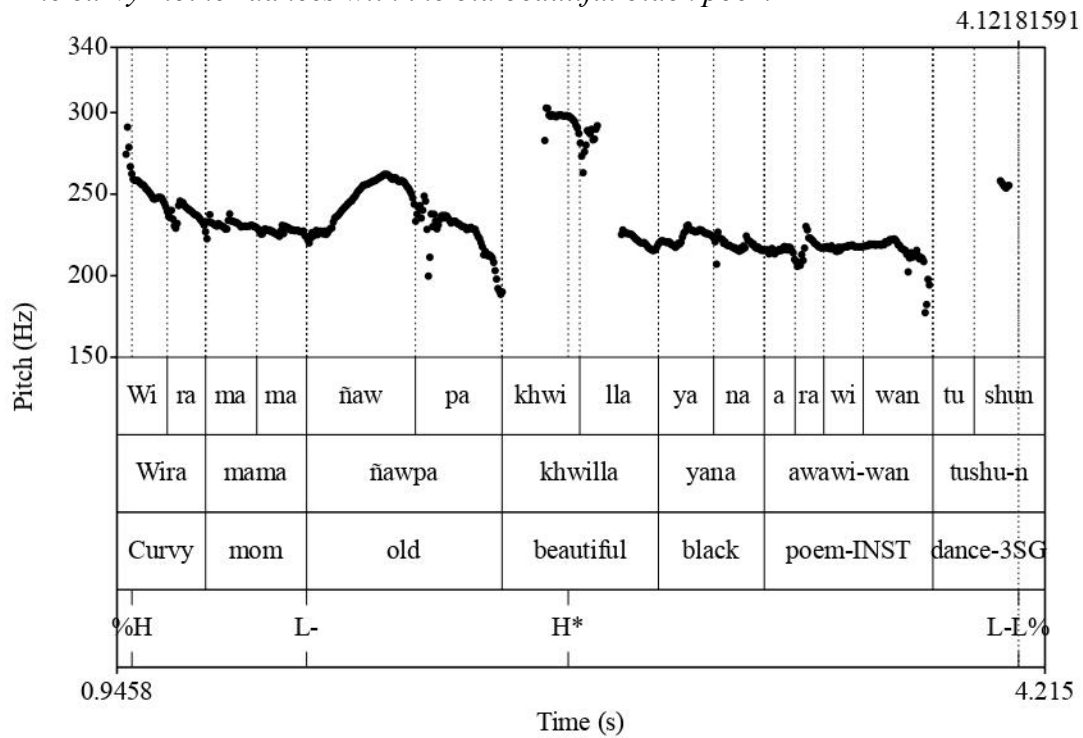


Figure 30: Khwilla

Prosodic Structure Analysis:

- **%H (Initial High Boundary Tone):** The contour begins with a high boundary tone aligned with the subject phrase *wira mama ñawpa* ('curvy old mom'), typical of Salasaka Kichwa declaratives. This high start indicates sentence-initial prosodic marking.
- **L- (Low Phrase Accent):** A low phrase accent appears after the adjective *ñawpa* ('old'), marking a slight pitch drop. This confirms the broader pattern of **subject deaccenting**: even with multiple adjectives (*wira, ñawpa*), the subject does not attract the nuclear pitch accent.
- **H (Nuclear Pitch Accent):** * The **highest pitch peak** in the utterance clearly aligns with *khwilla* ('beautiful'), again demonstrating this adjective's **exceptional prosodic behavior**. Despite being preceded by another adjective (*ñawpa*) and followed by a third (*yana*), *khwilla* alone receives the nuclear pitch accent. This confirms that *khwilla* can override standard left-edge prominence patterns in multi-adjective constructions.

- **Post-nuclear Slope:** Following the peak on *khwilla*, the pitch gradually declines across the remaining adjectives (*yana*), the instrumental noun phrase (*arawiwan*), and the verb (*tushun*). This reflects **post-nuclear deaccenting**, consistent with Kichwa’s general tendency to place only one pitch peak per clause in neutral intonation patterns.
- **L-L% (Final Low Boundary Tone):** The utterance concludes with a low boundary tone, typical of declarative contours in Kichwa.

In this example, although *khwilla* appears medially between two other adjectives, it still attracts the nuclear pitch accent. This reinforces the observation that *khwilla* behaves prosodically in an exceptional way, signaling a form of lexical prominence that overrides the default left-edge alignment seen with most adjective sequences.

Summary of Findings:

In Salasaka Kichwa, adjectives in S–Adj+O–V constructions typically attract the nuclear pitch accent, with prominence falling on the leftmost adjective in the phrase. However, the data reveal that this pattern is disrupted in the presence of certain lexically exceptional adjectives, most notably *khwilla* (‘beautiful’).

Unlike regular adjectives, *khwilla* consistently receives the nuclear pitch accent regardless of its syntactic position. Whether occurring as the sole adjective in a phrase or embedded medially in multi-adjective constructions, *khwilla* overrides the default left-edge prominence pattern and draws the pitch peak. This suggests that *khwilla* possesses inherent prosodic strength, likely tied to its expressive or evaluative meaning.

In contrast, when instrumental noun phrases are modified by regular adjectives, the nuclear pitch accent falls on the instrumental noun rather than the modifier, further reinforcing the idea that prosodic alignment is shaped not only by syntactic structure but also by lexical and semantic factors.

These findings point to a layered prosodic system in Kichwa, where lexical properties of specific words can override general prosodic rules. *Khwilla* exemplifies this exceptionality, behaving as a prosodic attractor even in contexts that typically exhibit deaccenting or default prominence elsewhere.

Section 7

Object and Instrumental Phrase (INST.P) in Isolation vs. Together

In Kichwa, when objects and instrumental phrases (INST.P) appear separately, they each receive individual prosodic prominence, with their **penultimate syllables carrying the highest pitch peak (H)***. However, when objects and INST.Ps occur together in the same sentence, the prosodic weight shifts, and only one of them maintains prominence, while the other shows a reduced pitch peak (H-).

7.1) Object and INST.P Together

31)

Mama millma-ta wankuwan awan.

[Mama] [millmata] [wankuwan] [awan]

2.S 3.O 3.INST.P. 2.V

Mama millma-ta wanku-wan awa-n.

mother wool-ACC knitting tool-INST knit-3SG

'The mother knits with a woolen knitting tool.'

Context Analysis:

This sentence describes a habitual or descriptive action: the mother knits using a woolen knitting tool. The direct object "millma-ta" ('wool') and the instrumental "wankuwan" ('with a knitting tool') together frame the event, with the verb "awan" ('knits') indicating the ongoing or habitual nature of the action. The use of two semantically related nouns—wool and knitting tool—creates a rich depiction of the activity.

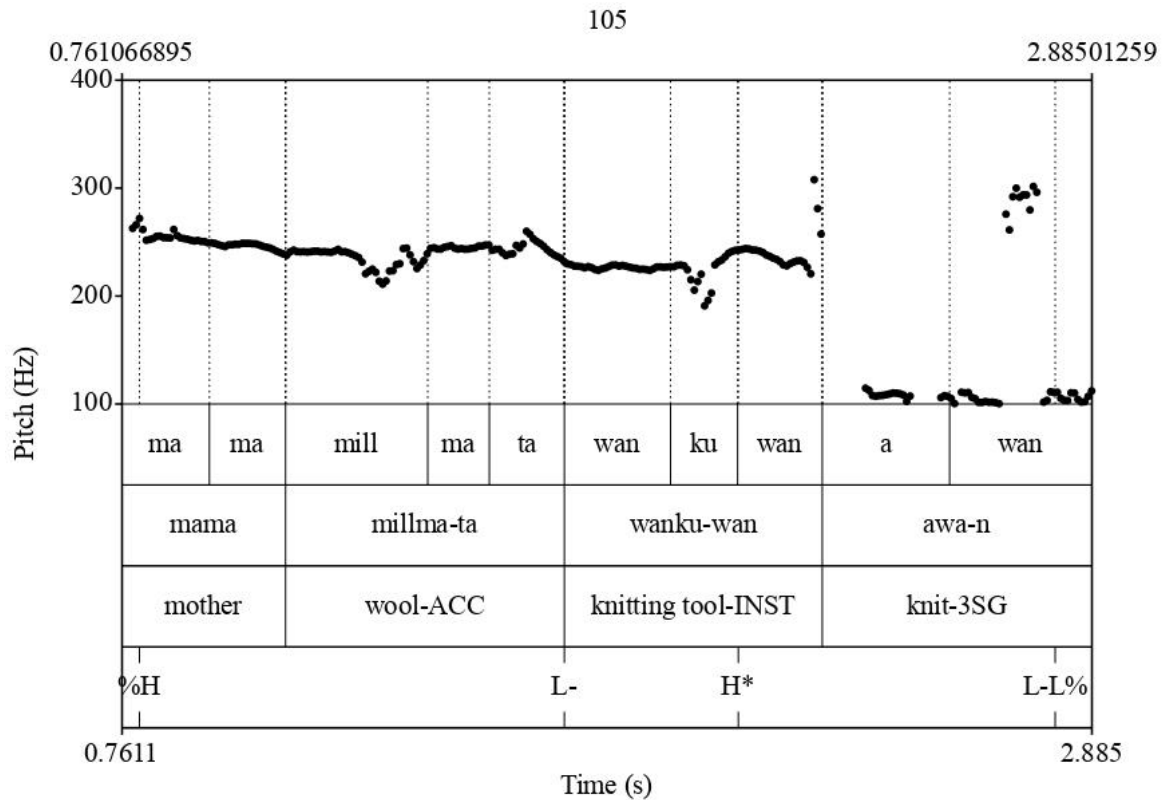


Figure 31: S-O-INST.P-V

Prosodic Structure Analysis:

- **Pitch Alignment:** When objects and instrumental phrases appear together, the **instrumental phrase receives the highest pitch (H)***, while the object shows reduced prominence (H-).
- **Prominence Shift:** Even though we can't see the pitch prominence, the instrumental phrase overrides the object's prosodic prominence, confirming that INST.P carries a stronger prosodic weight when both elements co-occur.
- **Declarative Intonation:** The final low boundary tone (L%) marks phrase closure, aligning with Kichwa's declarative prosody.

7.2 Summary of Findings

This chapter examined how object noun phrases (O) and instrumental phrases (INST.P) interact prosodically when they occur alone versus together in the same sentence. The analysis reveals a systematic shift in pitch prominence depending on whether these elements are isolated or co-occur in the clause.

Key Findings:

- **Individual Prominence in Isolation:**

When the object and instrumental phrase appear in isolation, each independently receives nuclear pitch prominence (H*), typically on the penultimate syllable of the phrase.

- **Prominence Shift in Combination:**

When both object and instrumental phrases co-occur in a sentence (e.g., S–O–INST.P–V), only one phrase maintains primary prominence, while the other shows reduced pitch (H-). In the examples analyzed, the instrumental phrase consistently receives the nuclear pitch accent, indicating that INST.P has greater prosodic weight when both elements are present.

- **Prosodic Downgrading of the Object:**

The presence of the instrumental phrase causes the object's prosodic prominence to be suppressed, even if the object carries important semantic content.

- **Declarative Boundary Consistency:**

Regardless of which phrase is prominent, the verb consistently carries a final low boundary tone (L-L%), maintaining Kichwa's expected declarative intonation contour.

General Insight:

These findings highlight that prosodic prominence in Kichwa is not evenly distributed among syntactic constituents but instead reflects a hierarchy of information structure, where instrumental phrases may override objects in prosodic salience. This prosodic behavior suggests an interaction between syntax, semantics, and focus, contributing to the speaker's ability to guide listener attention within complex events.

Section 8

Prosodic Effects of Emphatic and Focus Morphemes in Kichwa

In Kichwa, certain clitic-like morphemes function as focus or emphatic markers, and they frequently interact with the prosodic structure of the sentence. Among these, *-mi* (focus/assertive), *-lla* (limitative/affective), and *-ri* (politeness/request) are particularly notable for their capacity to either attract or coincide with pitch prominence, often aligning with the nuclear pitch accent. These morphemes are not only syntactically and pragmatically significant, but they also play an important role in shaping intonational contours, especially in declarative and interrogative contexts. This section explores how these suffixes influence pitch realization, sometimes overriding default prosodic tendencies such as penultimate stress or post-verbal deaccentuation. Through annotated examples, we illustrate how these morphemes mark focus, restriction, affectivity, or politeness, and how their prosodic behavior reflects their discourse function.

8.1) -mi

The Focus Morpheme -mi: Prosodic Anchoring and Information Structure

In declarative and interrogative utterances, *-mi* tends to attract or align with the highest pitch in the intonational phrase. This makes it a key anchor for pitch prominence, overriding default penultimate stress in Kichwa.

32)

Kan-manta-mi ‘ari’ nirka.
[Kanmantami] [‘ari’] [nirka].
4.S 2 2.V
Kan-manta-mi ‘ari’ ni-rka
You-because.of-FOC “yes” say-PST
‘He/she said ‘yes’ because of you.’

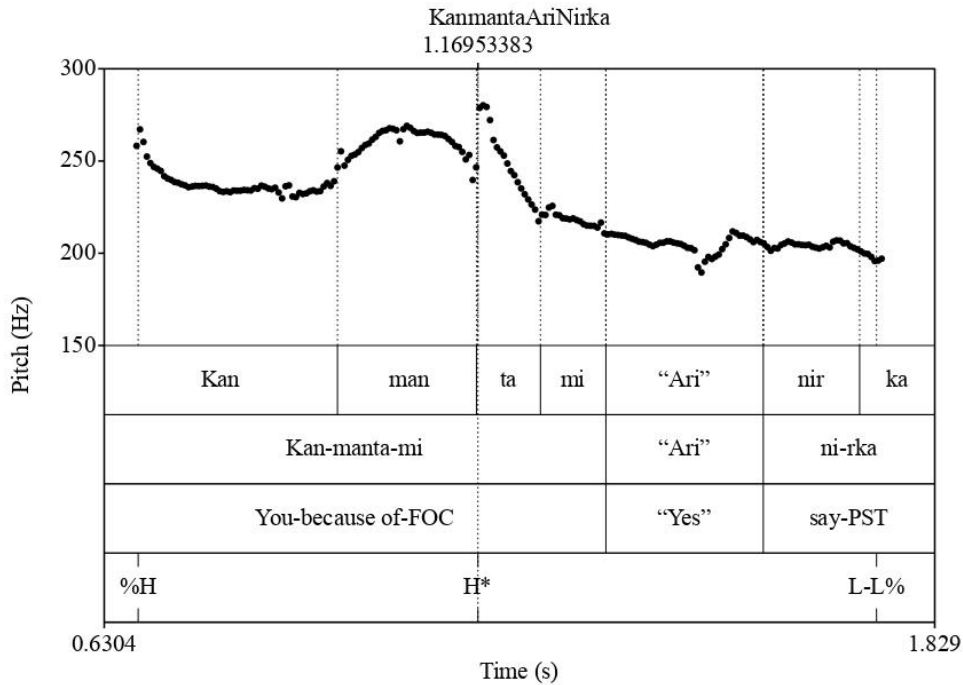


Figure 32: -mi

While the default stress would fall on -ta (penultimate), pitch prominence instead peaks on -man, demonstrating how -mi modifies the pitch contour to emphasize the directive source (kanmanta).

Syntactic and Discourse Uses of -mi (Carta Q., 1987)

Carta identifies multiple syntactic environments where -mi operates not only as a prosodic focus marker but also as a disambiguator, relativizer, and assertor:

a) Sentence-Initial -mi for Identification

Placed at the beginning of a sentence, -mi can resolve ambiguous subjects or attributes by signaling existential or identificational focus:

33)

Paymi ñuka-k pani (kan).
 [Paymi] [ñuka-k] [pani] (kan).
 2.S. 2.POSS 2.C
 Pay-mi ñuka-k pani.
 Pay-mi ñuka-k pani (kan).
 She-FOC I-POSS sister
 ‘She is my sister.’

Here, **paymi** introduces a subject or topic in a way similar to ‘**the one who is...**’ or , often clarifying implicit subjects.

b) –mi with Indefinites

When attached to indefinite determiners such as **pi**, **ima**, **may**, etc., **-mi** suppresses interrogativity and shifts them into relative pronouns:

- **paymi** = ‘the one that’
- **maypimi** = ‘where’

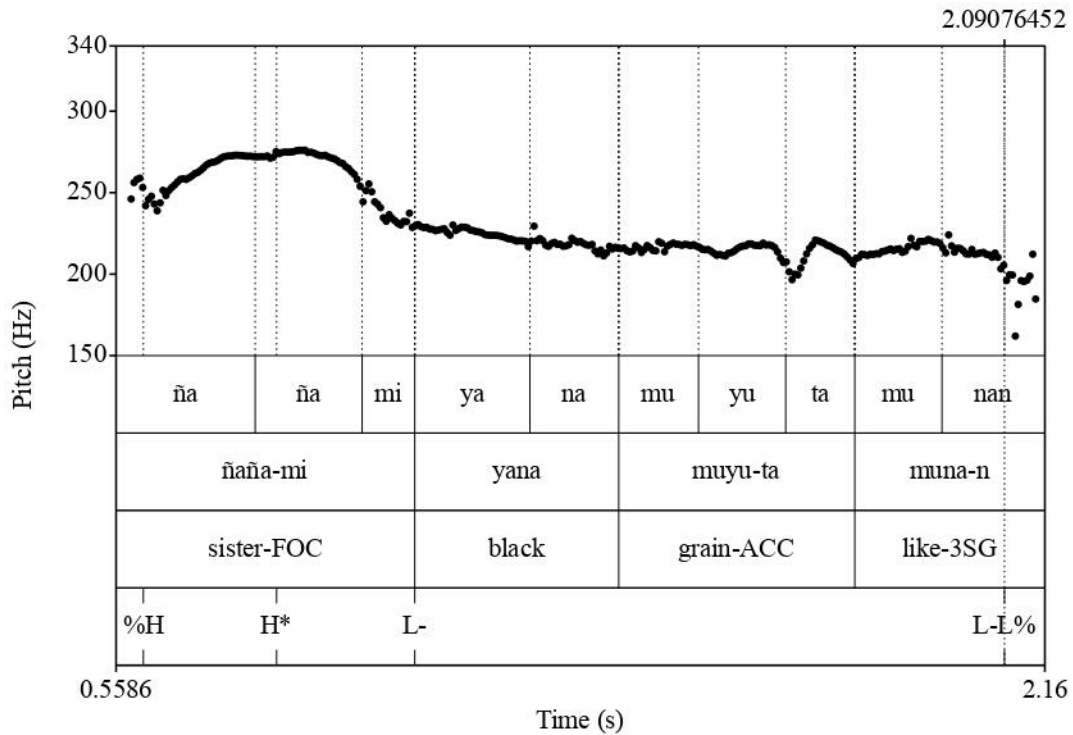
c) -mi in Different Positions

The focus marker **-mi** is not restricted to a fixed syntactic slot; it may attach to different constituents within the clause, with its prosodic behavior reflecting its information-structural function. Regardless of where it occurs, **-mi** reliably attracts the nuclear pitch accent, overriding default prosodic patterns (e.g., penultimate stress or default pitch peaks on the verb or instrumental). This makes it a strong indicator of focus, both syntactically and prosodically.

Example 1: Subject Focus

34)

Ñañami yana muyuta munan.
[Ñañami] [yana muyuta] [munan]
3.S 2.Adj 3.O 2.V
Ñaña-mi yana muyu-ta muna-n
sister-FOC black grain-ACC like-3SG
‘It is the sister who likes the black grain.’



→ In this sentence, the **pitch peak aligns with Ñaña**, specifically with **-mi**, indicating that the **subject is in focus**. The object and verb are deaccented.

Example 2: Object Focus

35)

Ñaña yana muyutami munan.

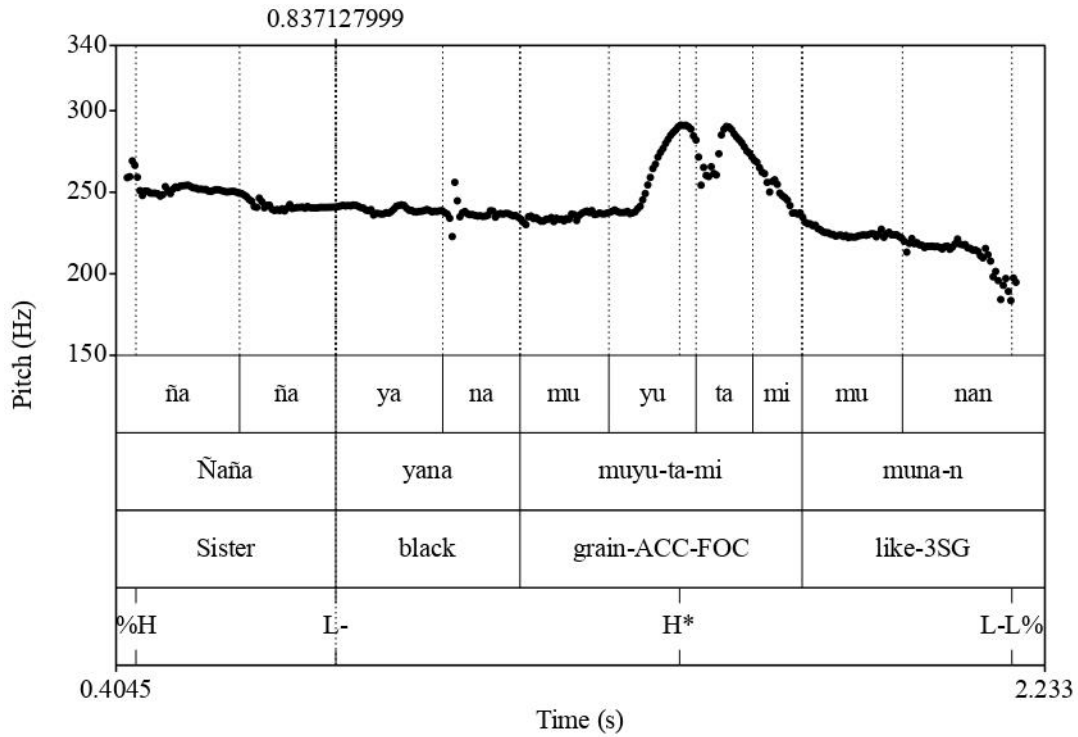
[Ñaña] [yana muyutami] [munan]

2.S 2.Adj 4.O 2.V

Ñaña yana muyu-ta-mi muna-n.

sister black grain-ACC-FOC like-3SG

'It is the black grain that the sister likes.'



→ The pitch peak shifts to *muyu*, specifically *-ta-mi*, showing that **the object is being focused**. The subject and verb are deaccented.

Example 3: Verb Focus (Post-verbal Focus)

36)

Ñaña yana muyuta munanmi.

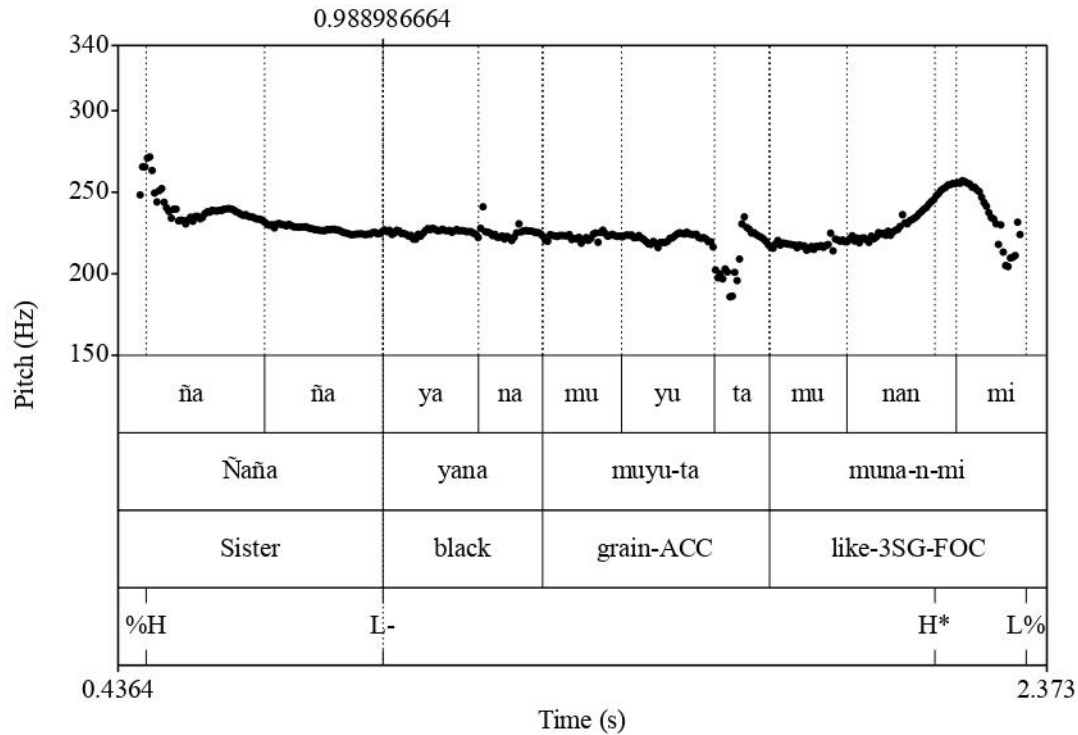
[Ñaña] [yana muyu-ta] [muna-n-mi]

2.S 2.Adj 3.O 3.V

Ñaña yana muyuta munanmi.

sister black grain-ACC like-3SG-FOC

'What she does is like the black grain.' / *'She does like the black grain.'*



→ The pitch peak falls on the verb, specifically the **-mi** attached to it. This construction marks the **verb or the action** as the focus of the utterance.

These examples demonstrate that **-mi is mobile**, and that wherever it appears, it **functions as a prosodic anchor**, consistently aligning with the **highest pitch (H*)** in the intonational phrase. This makes **-mi** a powerful tool for encoding **focus structure** in Kichwa, enabling speakers to highlight different parts of the utterance depending on discourse needs.

The enclitic **-mi** in Kichwa is a **multifunctional morpheme** that influences both **sentence structure and prosody**. It:

- **Marks focus and evidentiality**
- **Attracts nuclear pitch accents**, often overriding default stress
- **Shifts interrogatives into relatives** when attached to indefinites
- **Emphasizes immediacy or causation** when attached to gerunds

These patterns reinforce the centrality of **-mi** in both intonational phrasing and discourse organization in Kichwa. Its behavior shows how morphemes can function as prosodic triggers, reconfiguring pitch contours to reflect pragmatic salience and speaker stance.

8.2) -lla

The Restrictive and Affective Use of -lla

Functions as a restrictive/limitative morpheme ("only", "just") and can also interact with pitch depending on discourse structure.

a. **Chayllata ninkapak munarkani.**

[Chayllata] [ninkapak] [munarkani].

3.S 3.Dat 4.V

Chay-lla-ta ni-nkapak muna-rka-ni.

That-only-ACC say-DAT like-PST-1SG

"I only wanted to say that."

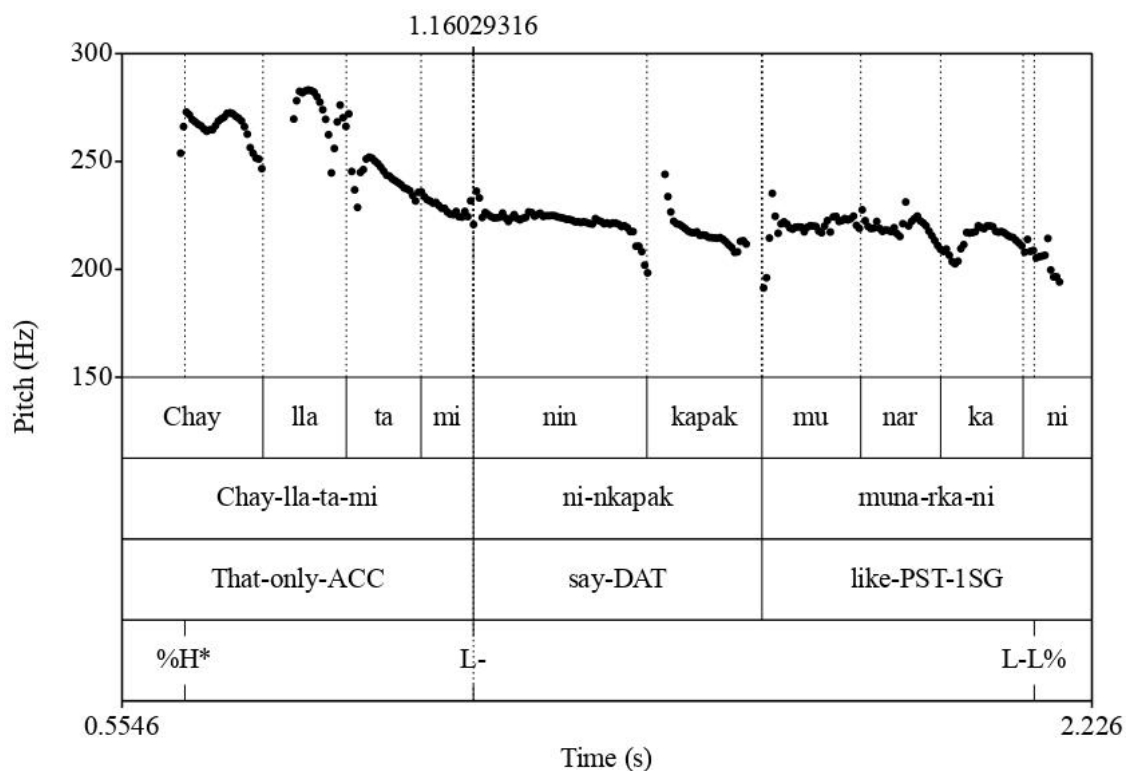


Figure 33: -lla

Prosodic Structure Analysis: Chayllata ninkapak munarkani

- Prominent Word:** The highest pitch peak in the utterance occurs on the restrictive morpheme cluster "Chayllata", specifically on "Chay", with a high boundary tone and pitch accent (%H*). This reflects the affective and contrastive function of -lla("only"), which often carries prosodic weight when marking exclusivity or emphasis.

- **Intonational Characteristics:** The utterance begins with a prominent high pitch accent (%H*) on the restrictive focus "Chayllata". A low phrase accent (L-) follows immediately after, indicating a shift to backgrounded or supportive material. The verb "munarkani" concludes the utterance with a low boundary tone (L-L%), consistent with declarative closure in Kichwa.

ToBI-style Analysis:

- %H* — aligned with "**Chay**" in "**Chayllata**"
- L- — following the focused restrictive phrase
- L-L% — aligned with the end of the utterance on "**munarkani**"

This prosodic behavior supports the idea that **-lla**, beyond its semantic role as a limitative marker ("only"), also serves a **discourse function**, attracting pitch prominence when signaling contrast, restriction, or emotional emphasis in speaker intent.

Sometimes used affectively, without contrastive focus but with emotional emphasis, which may or may not correlate with pitch prominence.

37)

- Kuyashka wawa-lla → *'So loved baby'*
- Llakishka mama-lla → *'So missed mom'*

8.3) -ri

High Pitch as Politeness: The Case of -ri in Pleading and Mitigation

-ri (e.g., in **mikiri**) can be used as a softener or polite imperative, often associated with higher pitch, reflecting deference, urgency, or pleading.

38)

Mikiyri
3
Mik-iy-ri
eat-IMP-POL
'Please eat'

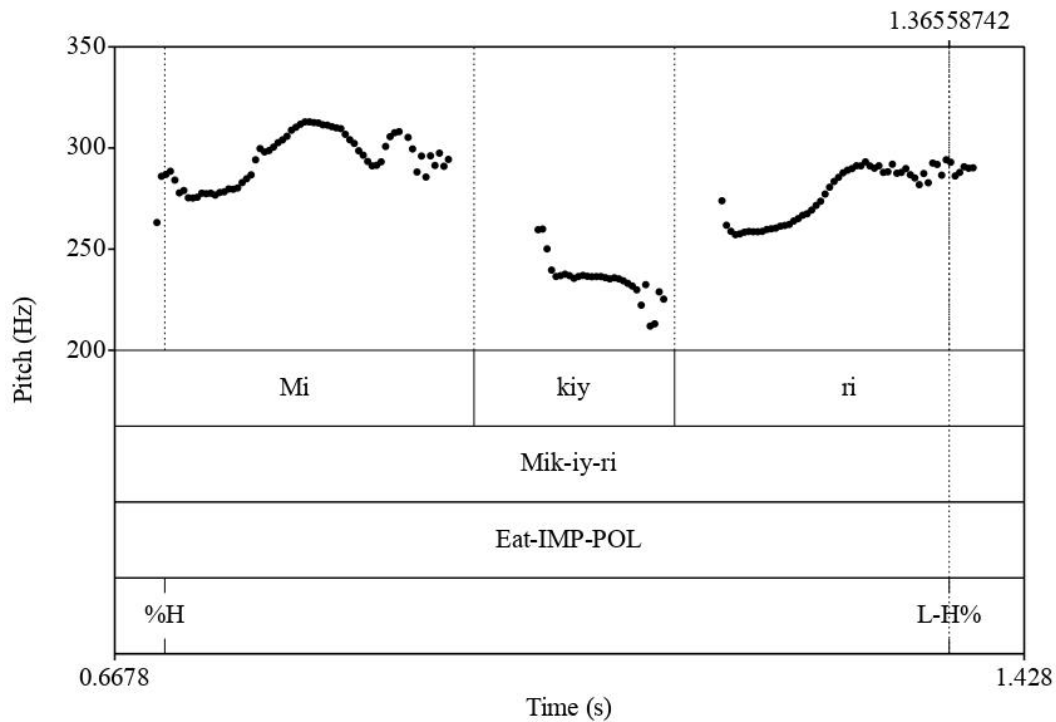


Figure 34: -ri

Prosodic Structure Analysis:

In the polite imperative mikiyri (‘please eat’), the highest pitch peak is clearly realized on the final syllable -ri, which marks politeness or mitigation. This pitch alignment contrasts with regular imperatives, where the peak typically falls on the verb root.

Speaker Insight:

Based on my native speaker intuition, -ri not only softens the command but also attracts prosodic emphasis, signaling urgency, deference, or emotional nuance. This aligns with the observed L-H% boundary tone on -ri, suggesting that the politeness morpheme carries expressive and prosodic weight in Kichwa.

ToBI-style Analysis:

- %H — utterance-initial
- L-H% — aligned with -ri, marking both a polite imperative and a high rising boundary tone

This example supports the broader pattern that **intonation in Kichwa reflects pragmatic force**, with polite or emotionally charged morphemes like -ri taking prosodic prominence when speaker intention demands it.

8.4) Summary of Findings

This chapter examined the prosodic behavior and discourse functions of three enclitic morphemes in Kichwa -mi, -lla, and -ri, each of which plays a unique role in structuring information, expressing speaker stance, and shaping intonational contours. Despite their differing grammatical functions, all three share a common prosodic trait: they regularly attract pitch prominence and reshape the intonational phrasing of the utterance based on pragmatic salience.

Key Findings:

- **-mi (Focus/Evidential Marker):**
 - Consistently draws the **nuclear pitch accent (H*)**, overriding Kichwa's default penultimate stress pattern.
 - Acts as a **prosodic anchor** in both declaratives and interrogatives.
 - Functions syntactically as a **focus marker**, disambiguator, or relativizer—especially when attached to **indefinites** (e.g., *maypimi* 'where').
 - Highlights causal or emphatic relations when used in adverbial or clausal structures.
- **-lla (Restrictive and Affective Marker):**
 - Encodes **limitation, exclusivity, or emotional emphasis**, often through **initial high pitch (%H*)** on the marked phrase.
 - Can signal **contrastive focus** or affective nuance, such as tenderness or sadness, especially in emotive expressions (e.g., *kuyashka wawa-lla* 'so loved baby').
 - Interacts with intonation in a way that **foregrounds emotionally or contrastively charged elements**, sometimes independently of contrast.
- **-ri (Politeness Marker):**
 - Serves as a **softener** or **pleading device** in imperative forms.
 - Attracts the **highest pitch in the utterance**, often on the **final syllable**, producing a distinctive **L-H%** rising boundary contour.
 - Signals **deference, urgency, or emotional politeness**, consistent with affective imperatives.

- Native speaker intuition confirms that **-ri functions not just grammatically but expressively**, shaping the speaker's interactional tone.

General Prosodic Pattern:

- These morphemes act as prosodic triggers, each capable of reconfiguring pitch contours to reflect information structure, speaker attitude, or politeness strategy.
- They override standard stress placement and contribute directly to the intonational meaning of the clause.

Overall, this section underscores that -mi, -lla, and -ri represent a system of morphemes in Kichwa that actively interact with prosody. These elements show how Kichwa uses morphemes not just for syntactic marking, but also for fine-grained prosodic modulation, revealing the intricate interface between grammar, prosody, and discourse in the language.

Section 9

Multiple suffixes

This section explores how multiple suffixes attached to a single lexical item interact with Kichwa's prosodic system. In contrast to previous sections that examined individual suffixes in isolation, this chapter focuses on cases where two or more suffixes co-occur on the same word, particularly on nouns and verbs. These combinations include grammatical, evidential, affective, and pragmatic morphemes, all of which may compete for pitch prominence or contribute to intonational restructuring.

We investigate how stacked suffixes influence prosodic phrasing, especially in terms of pitch alignment, accent placement, and boundary tone patterns. Special attention is paid to whether certain suffixes—such as focus (-mi), diminutive (-wa), instrumental (-wan), and politeness (-ri)—retain their prominence when combined with others. Ultimately, this section examines how prosody adjusts when multiple grammatical and expressive functions are encoded in a single word, shedding light on Kichwa's morpho-prosodic architecture. This sentence features complex morphological stacking across constituents:

39)

Ñuka-ta-ka mishki tanta-wa-ta-mi miku-nayan.
[Ñukataka] [mishki tantawatami] [mikunayan].
4.S 2.Adj 5.O 4.V
Ñuka-ta-ka mishki tanta-wa-ta-mi miku-nayan
I-ACC-TOP sweet bread-DIM-ACC-FOC eat-want]
'I want to eat a little sweet bread.'

Context Analysis:

This sentence expresses a personal desire or intention, specifically the speaker's wish to eat a small amount of sweet bread. The subject "ñuka-ta-ka" ('as for me' or 'I-ACC-TOP') is marked with both topic and dative functions, emphasizing the speaker's perspective. The object "mishki tantawata-mi" includes the adjective "mishki" ('sweet') and the diminutive -wa, conveying affection or smallness, and is further marked with -mi for focus. The verb "mikunayan" ('I want to eat') combines volition with future or intent.

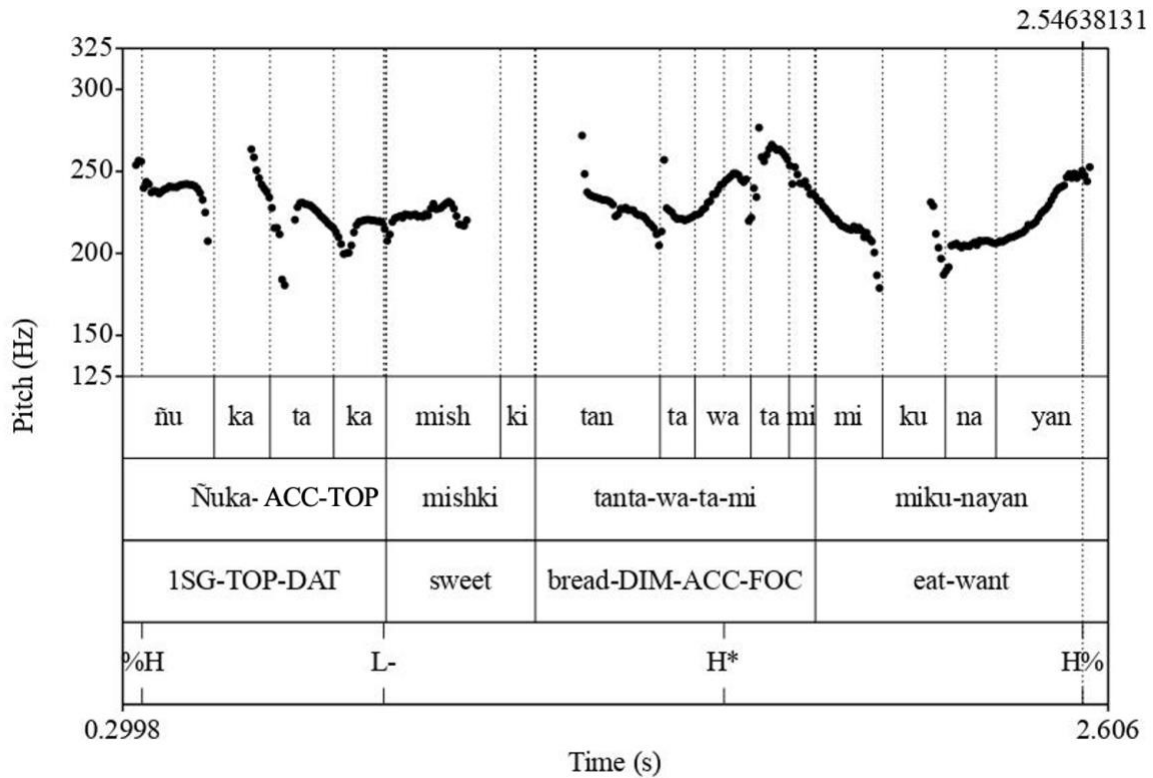


Figure 35: MultiplSuff

Prosodic Structure Analysis:

Prominent Word: The highest pitch peak (H*) occurs within the object phrase, specifically on *tantawatami*—a word with multiple stacked suffixes: diminutive (-*wa*), accusative (-*ta*), and focus (-*mi*). Based on our baseline generalization, we would typically expect the adjective in an S-Adj+O-V structure to receive prosodic prominence. However, in this case, the focus morpheme -*mi* appears to attract the nuclear pitch accent, overriding the expected prominence on the adjective. This demonstrates that morphologically marked informational focus can take precedence over structurally determined prosodic patterns in Kichwa.

Intonational Characteristics:

The utterance begins with a high boundary tone (%H).

The pitch track does not show the break by the edge of the subject but there is a boundary perceived by the speaker.

The pitch rises to a peak on "tami" (within *tantawatami*), aligning with the focus marker -*mi*.

A second, slightly lower rise appears on "yan" in the verb "mikunayan", producing a rising final boundary (H%), possibly reflecting the volitional or emotive force of the sentence.

ToBI-style Analysis:

- %H — on *ñukataka*

- L- — following the subject
- H* — on -mi of "tantawatami"
- H% — rising final boundary on "mikunayan"

Despite its morphological complexity, the pitch accent aligns with the focused morpheme (-mi), confirming that syntactic focus marking directly informs prosodic realization in Salasaka Kichwa. All other morphemes (topic, dative, diminutive, accusative) remain prosodically subordinate.

40)

Ñañaaka wasiyukwanmi risha nin.
 [Ñañaaka] [wasiyukwanmi] [risha nin.]
 3.S 5.INST.P 2.V 1.V
 Ñaña-ka wasi-yuk-wan-mi ri-sha ni-n.
 sister-TOP house-POSS-INST-FOC go-NOM want-3SG
‘Sister wants to go with the house owner.’

Context Analysis:

This sentence expresses desire or intention involving the speaker’s sister, who wants to go with the house owner. The subject "Ñañaaka" (‘sister-TOP’) is topicalized, indicating known or previously mentioned information. The instrumental phrase "wasiyukwanmi" (‘with the house owner’) includes a possessive suffix (-yuk), instrumental (-wan), and focus marker (-mi)—a clear case of multiple suffixes stacked on a single noun base. The verb complex "risha nin" (‘go-NOM want-3SG’) conveys indirect report or internal desire.

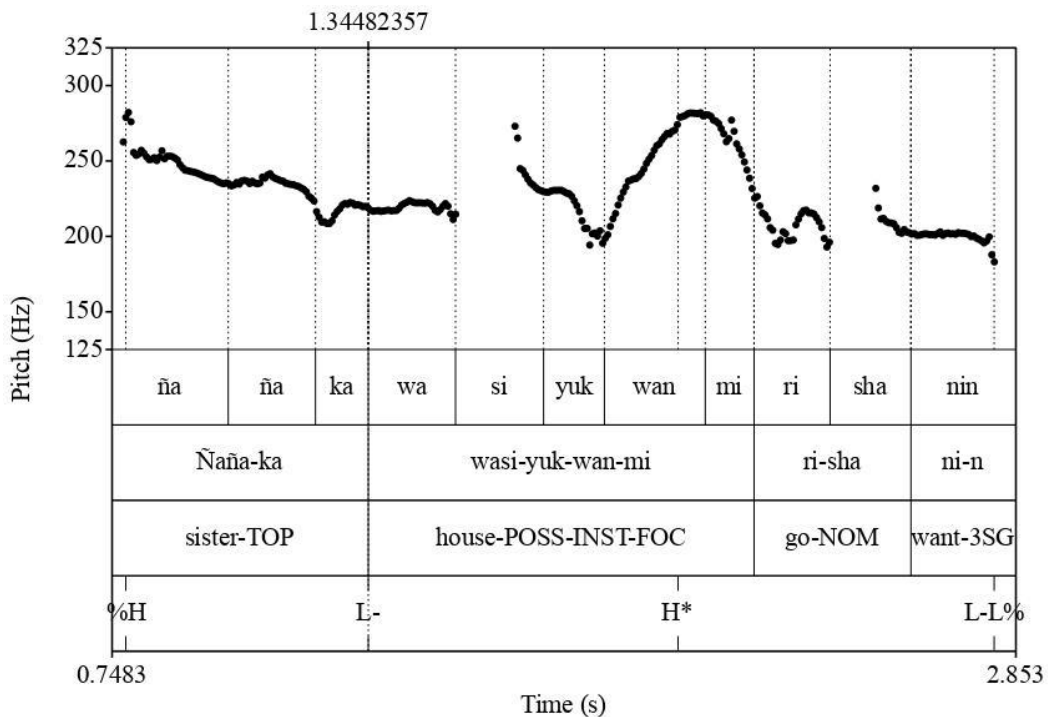


Figure 36: MultiplSuff

Prosodic Structure Analysis:

- Prominent Word: The highest pitch peak (H*) is clearly aligned with the focus marker -wan prior to (-mi) in the morphologically complex instrumental phrase wasiyukwanmi ('with the house owner'). Despite the stacking of three suffixes (-yuk, -wan, -mi), -wan attracts nuclear pitch prominence, showing its prosodic strength even in embedded morphological contexts.

Intonational Characteristics:

- The utterance begins with a high boundary tone (%H) on the subject Ñañaaka, followed by a low phrase accent (L-).
- A sharp rise in pitch occurs on -wan, the final suffix in the instrumental phrase, indicating the presence of a focus domain.
- The verb complex "rishā nin" concludes with a low boundary tone (L-L%), marking declarative sentence closure.

ToBI-style Analysis:

- %H — on Ñañaaka
- L- — after the subject
- H* — aligned with -wan in wasiyukwanmi
- L-L% — ending on "nin"

This example supports earlier findings in this chapter: even when multiple suffixes co-occur, -mi reliably retains prosodic prominence, reinforcing its role as a focus-sensitive prosodic anchor in Kichwa.

41)

Wawakunaka Wamunlumamanta misikunawanmi pukllankunkuna.

[Wawakunaka] [Wamunlumamanta misikunawanmi] [pukllankunkuna].

5.S 6.Adj 5.INST.P 5.V

Wawa-kuna-ka Wamunluma-manta misi-kuna-wan-mi puklla-ku-nkuna.

kid-PL-TOP Wamunluma-ABL cat-PL-INST-FOC play-PROG-3PL

'The kids are playing with the cats from Wamunloma.'

Context Analysis:

This sentence describes an ongoing group action: the children are playing with the cats from Wamunloma. The subject "wawakunaka" ('kids-TOP') is plural and topicalized, indicating they are already known or foregrounded in discourse. The instrumental phrase "Wamunlumamanta misikunawanmi" is morphologically complex and contains both a source

marker (-manta) and a focused instrumental phrase (-wan-mi), modifying the object "misikuna" ('cats'). The focus marker -mi highlights this phrase, possibly to emphasize the company or origin of the cats. The verb "pukllankunkuna" ('they are playing') appears in the progressive aspect, indicating an action in progress.

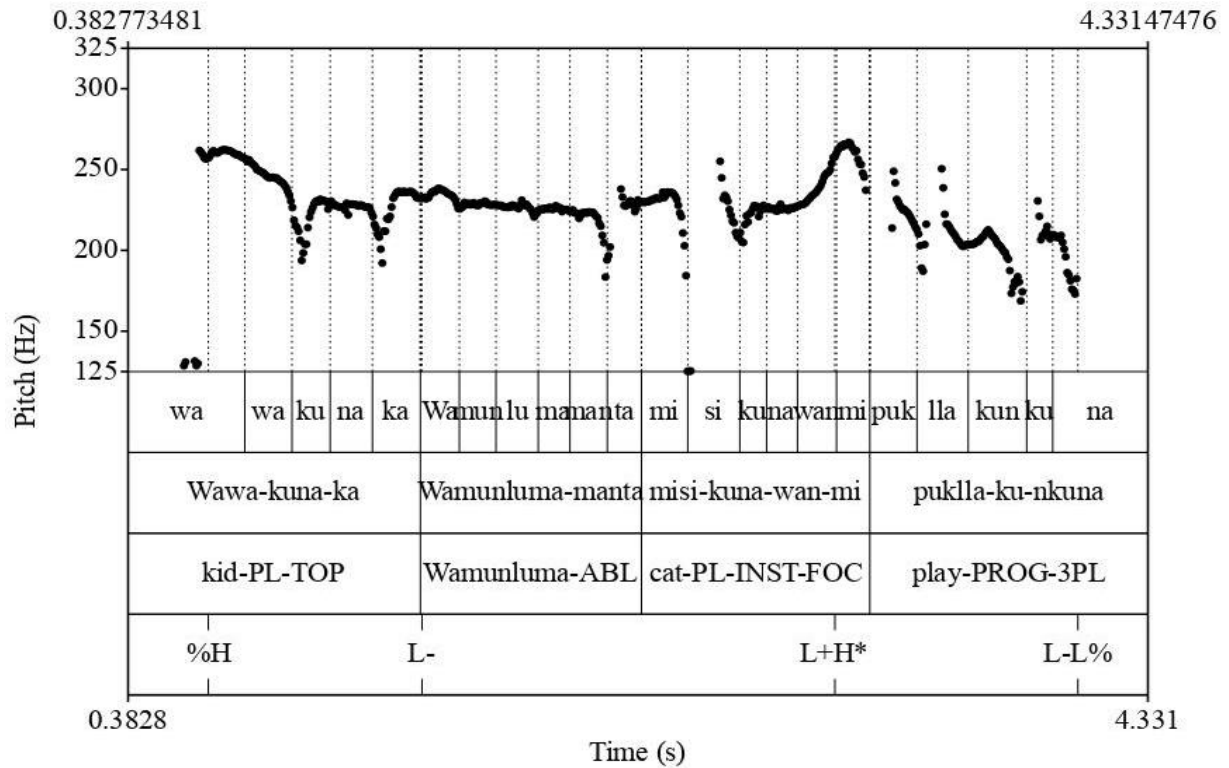


Figure 37: MultiplSuff

Prosodic Structure Analysis

Prominent Word: The highest pitch rise is aligned with *misikunawanmi*, particularly on the focus morpheme *-wan*, despite the complex stacking of plural *-kuna*. This affirms the strong prosodic attraction of the *-mi*'s prior syllable pitch prominence and also *-wan*, even when embedded within a long, morphologically dense word.

Intonational Characteristics:

- The utterance begins with a high boundary tone (%H) on *wawakunaka*, followed by a low phrase accent (L-) after the subject and locative phrase.
- A pitch rise (L+H*) occurs on the instrumental phrase "misikunawanmi", indicating focal emphasis.

- The sentence ends with a falling L-L% boundary tone on the verb "pukllankunkuna", consistent with the declarative prosodic pattern in Kichwa.

ToBI-style Analysis:

- %H — on *wawakunaka*
- L- — after *Wamunlumamanta*
- L+H* — on *misikunawanmi*, aligned with **-mi**
- L-L% — final fall on *pukllankunkuna*

Even in highly embedded structures with multiple suffixes, -mi remains the dominant prosodic target, attracting nuclear pitch prominence and shaping the overall intonational contour of the clause. This reinforces the conclusion that focus morphology in Kichwa has strong prosodic consequences, regardless of suffix complexity or stacking.

9.4) Summary of Findings

This section examined the prosodic effects of multiple stacked suffixes in Kichwa. Across all examples, one pattern emerged with remarkable consistency.

Key Findings:

- **Focus Dominance:**
In all cases analyzed, -mi overrides other suffixes in terms of pitch prominence. Whether attached to noun phrases or instrumental constructions, -mi consistently aligns with the highest pitch peak (H*), confirming its role as a prosodic anchor for focus in Kichwa.
- **Suffix Hierarchy:**
While other suffixes like -wa, -ta, -wan, or -yuk contribute semantic or grammatical information, they do not receive primary prosodic prominence. Instead, their presence appears to be prosodically subordinate to -mi, even in stacked configurations.
- **Pitch Alignment in Dense Words:**
Complex words such as *tantawatami* and *misikunawanmi* demonstrate that pitch targets are determined by morphosyntactic function, not linear position or syllable count. The final -mi consistently draws the pitch peak, confirming that focus structure governs prosodic realization.

- **Boundary Tone Stability:**

Despite morphological complexity, the overall **intonational contour remains stable**:

- Utterances begin with a high boundary tone (%H)
- A low phrase accent (L-) typically follows the subject
- Pitch peaks (H*) fall on -mi when present
- Sentences end with a low boundary tone (L-L%), preserving the declarative frame

General Insight:

These findings confirm that suffix stacking in Kichwa does not result in prosodic conflict, but instead reflects a hierarchical alignment of pitch prominence, with -mi as the primary prosodic target. Even in morphologically dense words, prosodic structure is predictably shaped by focus and discourse function rather than phonological weight or syntactic depth.

Thus, Kichwa's morpho-prosodic system is highly sensitive to information structure, and certain morphemes, especially -mi with an instrumental, play a decisive role in contour formation, showing how grammar and prosody are tightly integrated in the language.

Section 10

Complex Subjects

This section investigates the prosodic behavior of complex subjects in Salasaka Kichwa, focusing on structures that include possessive chains, relative clauses, and multiple modifiers. In earlier sections, we observed that prosodic peaks in Kichwa declaratives typically align with the object or elements within the verb phrase, while subjects often exhibit flatter or lower pitch contours. However, most of those subjects were syntactically simple or short, raising the question: is the reduced pitch activity in subjects a function of their brevity, or a broader prosodic pattern in the language?

By analyzing sentences with syntactically rich subject phrases, we test whether increased complexity in the subject domain such as embedded noun phrases or relative clauses elicits changes in prosodic prominence, or whether the subject remains a prosodically low-profile constituent regardless of internal complexity. This analysis helps clarify whether Kichwa prosody is sensitive to hierarchical structure within the subject, or whether it continues to prioritize the verb phrase and object domain even in more complex constructions.

Using pitch track data from utterances with possessive -n, -wan ('with'), -nayan ('his/her own'), and relativized subjects, this section explores the interaction between syntactic complexity and prosodic realization in the left edge of the clause.

42)

Kanpak mamak wakraka waykupi shayarka.
[[Kanpak mamak] wakraka] [waykupi] [shayarka].
2.POSS 2.POSS 3.S 3.LOC 3.V
Kan-pak mama-k wakra-ka wayku-pi shaya-rka.
You-POSS mother-POSS cow-TOP river-LOC stand-PST.3SG
'Your mom's cow was standing in the river.'

Context Analysis:

This sentence provides a descriptive past event, stating that the cow belonging to your mother was standing in the river. The complex subject “Kanpak mamak wakraka” involves two possessive constructions: *kanpak* ('your') and *mamak* ('mother's'), nested to indicate double

possession (*your mother's cow*). The locative adverb “waykupi” (‘in the river’) specifies the setting, while the verb “shayarka” (‘was standing’) places the action in the past.

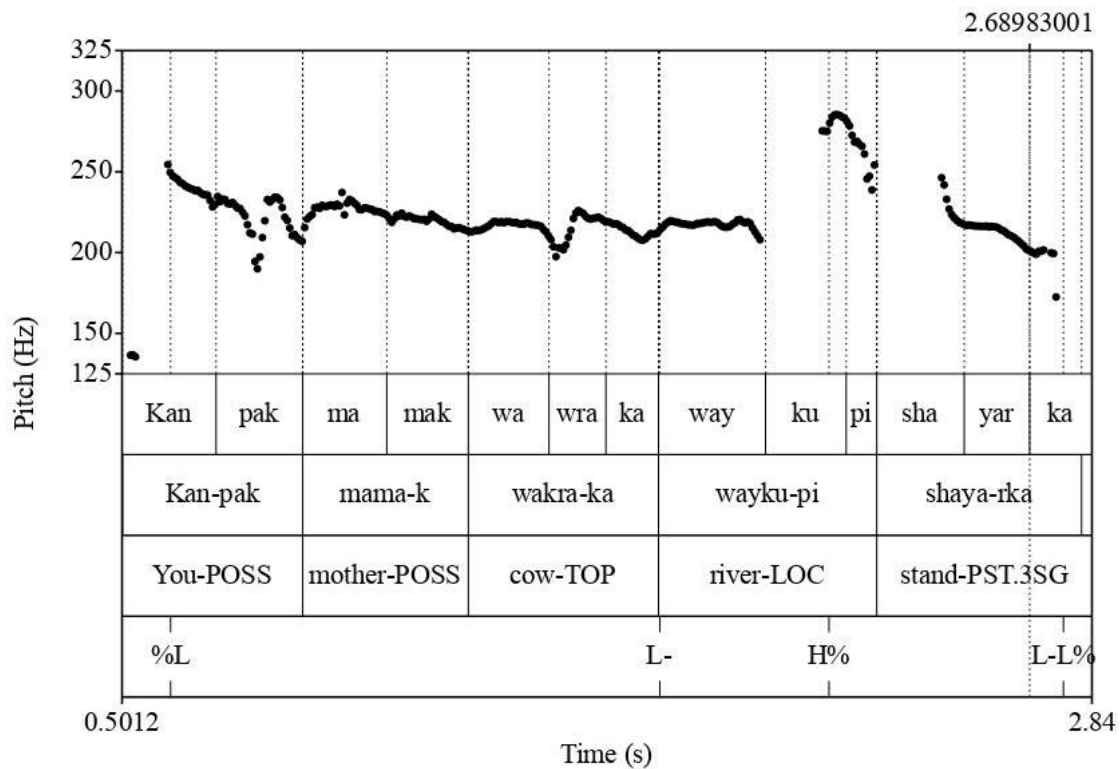


Figure 38: ComplexSubj

Prosodic Structure Analysis:

Prominent Word: The locative phrase “waykupi” (‘in the river’) receives the highest pitch peak (H%), marking it as the most prosodically prominent element in the utterance. This aligns with the common pattern in Kichwa where locative adverbs or phrases introducing new or contrastive information attract pitch prominence.

Intonational Characteristics:

- The utterance begins with a **low boundary tone (%L)** on the complex subject “**kanpak mamak wakra**” (your mother’s cow), showing backgrounding or givenness.
- A **low phrase accent (L-)** follows the subject and precedes the rise on the locative.
- The **locative phrase “waykupi”** triggers a rise to **H%**, signaling its informational focus.

- The final verb “**shayarka**” ends the utterance with a falling **L-L%**, indicating standard declarative closure.

ToBI-style Analysis:

- %L — utterance-initial
- L- — after the subject phrase
- H% — aligned with “**pi**” in *waykupi*
- L-L% — aligned with the final verb *shayarka*

This prosodic contour demonstrates that even in sentences with nested possessives, pitch prominence can shift to locative phrases, particularly when they occur preverbally and specify spatial setting. Although the locative phrase in this example is not morphologically marked for focus, its prosodic prominence aligns with a broader pattern in Kichwa: subjects generally do not receive nuclear pitch accent, while non-subject constituents—such as locative or instrumental phrases—frequently do, especially when appearing in preverbal position.

43)

Ñukak ñañak wawakunaka sumakta dansakunkuna
 [[Ñukak ñañak] wawakunaka] [sumakta] [dansakunkuna]
 Ñuka-k ñaña-k wawa-kuna-ka sumak-ta dansa-ku-nkuna
 I-POSS sister-POSS child-PL nice-ly dance-3PL
‘The children of my sister dance nicely.’

Context Analysis:

This sentence provides a descriptive statement about an ongoing or habitual activity: the children of the speaker’s sister dance nicely. The subject is a complex possessive noun phrase: *Ñukak ñañak wawakunaka* (‘my sister’s children’), marked with plural -kuna and the topic marker -ka, indicating the children are the known or foregrounded participants. The adverb "sumakta" (‘nicely’) specifies the manner of the action, while the verb "dansakunkuna" is in the progressive or habitual aspect, marked with -ku and third-person plural -nkuna.

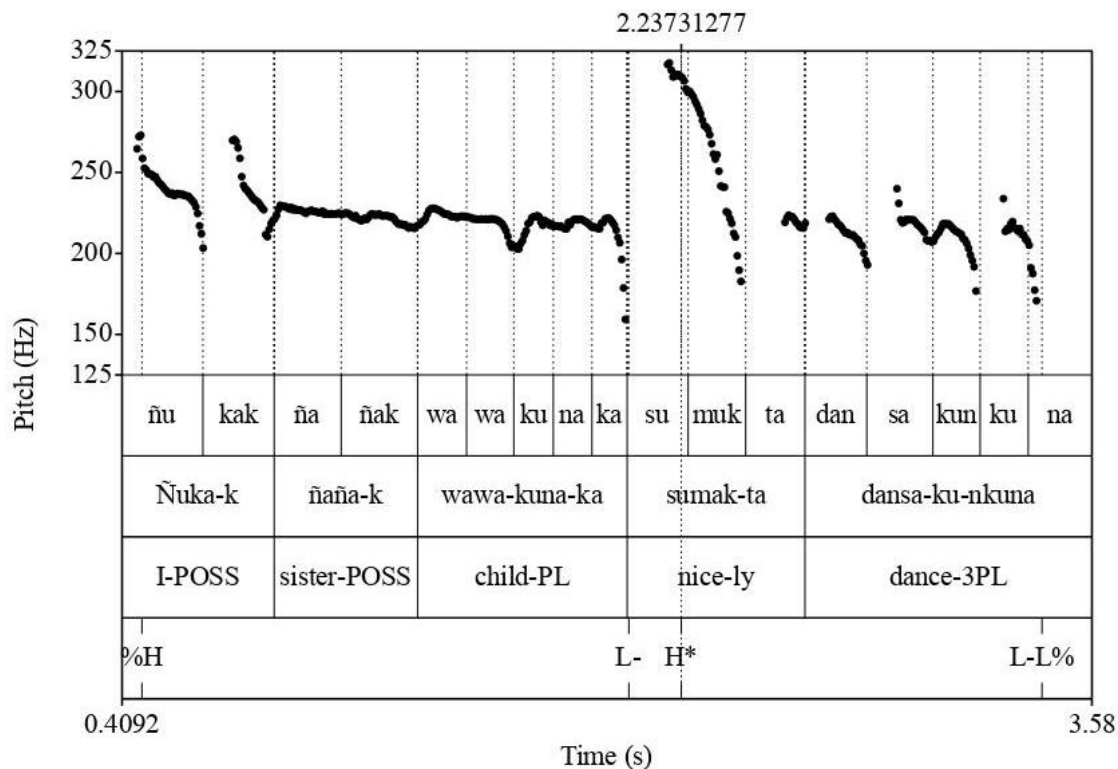


Figure 39: ComplexSubj

Prosodic Structure Analysis:

Prominent Word: The highest pitch peak (H*) is aligned with the adverb "sumakta" ('nicely'), indicating that the manner of the action is the focal point of the utterance. This matches broader patterns in Kichwa where adverbs of manner often receive prosodic prominence when they convey essential or contrastive information.

Intonational Characteristics:

- The sentence opens with a **high boundary tone (%H)** on the complex subject "**Ñukak ñaña** wawakunaka".
- A **low phrase accent (L-)** follows the subject, signaling a shift to new information.
- The **pitch rises steeply on "sumak"**, showing alignment with the **nuclear pitch accent (H*)**.
- The verb "**dansakunkuna**" concludes the utterance with a **low boundary tone (L-L%)**, indicating a standard declarative closure.

ToBI-style Analysis:

- **%H** — on the subject "**Ñukak ñaña** wawakunaka"

- L- — after the subject phrase
- H* — on "sumakta"
- L-L% — on the verb "dansakunkuna"

This prosodic pattern confirms that in declaratives, when manner adverbs are present, they are strong candidates for receiving nuclear pitch prominence, especially when they convey speaker evaluation or add affective weight to the clause.

44)

Ladupi tiyuk runakunak achkuka fiñalladi kan

[Ladupi tiyuk runakunak achkuka] [fiñalladi] [kan]

3. 2. 4. 3.S 4.Adj 1.V

Ladu-pi tiyu-k runakuna-k achku-ka fiña-lladi ka-n

close-LOC live-NOM people-POSS dog-TOP aggressive-very BE-3SG

'The dog of the people who live next to us is very aggressive.'

Context Analysis:

This sentence delivers a descriptive statement identifying a particularly aggressive dog belonging to people who live nearby. The subject is a complex possessive noun phrase, where "runakunak" ('people') is modified by the relative clause "tiyuk" ('who live'), and the head noun "fiñalladi" ('dog') is topicalized with -ka. The adverb "achkuka" ('very') intensifies the adjective "fiñalladi" ('aggressive'), forming a scalar evaluation.

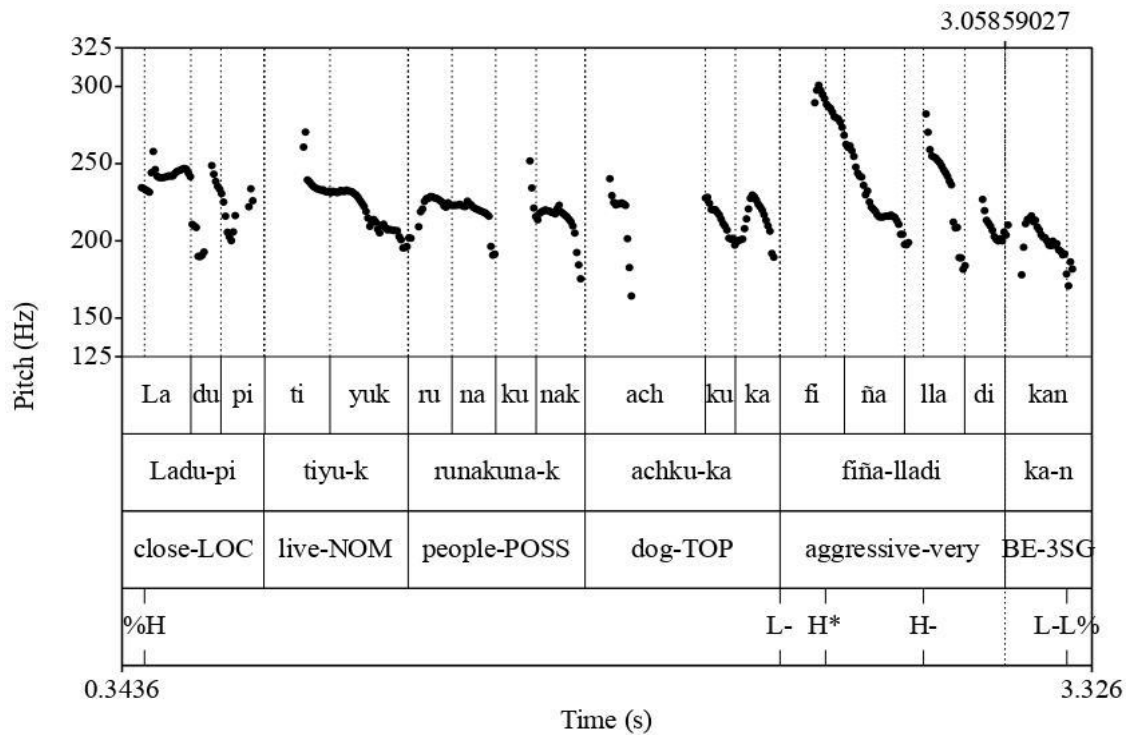


Figure 40: ComplexSubj

Prominent Word:

The nuclear pitch accent (H*) aligns with the adjective "fiñalladi" ('very aggressive'), not the noun "achkuka" ('dog'). This indicates that evaluative intensity, rather than the topic noun, carries prosodic focus. The adjective receives prominence, highlighting the speaker's judgment or emotional stance, possibly reflecting emphasis or contrast.

Intonational Characteristics:

- The sentence opens with a high boundary tone (%H) on the locative phrase "Ladupi" ('close to us').
- A low phrase accent (L-) spreads across the embedded subject and relative clause "tiyuk runakunak achkuka" ('the dog of the people who live next to us'), which is informationally backgrounded.
- The pitch peaks sharply on "fiñalladi" (H*), signaling that the evaluative adjective is the prosodic focus of the utterance.
- The final verb "kan" ends with a low boundary tone (L-L%), completing the declarative contour.

ToBI-style Analysis:

- %H — on Ladupi
- L- — through *tiyuk runakunak achkuka*
- H* — on *fiñalladi*
- L-L% — on *kan*

This contour shows that not all pitch peaks target nouns or topics; adjectives, especially evaluative or scalar ones like "*fiñalladi*", can attract nuclear pitch prominence when conveying affective or contrastive focus. This highlights that prosodic structure in Kichwa is sensitive to informational and expressive content, not just syntactic position.

Summary of Findings

This chapter explored the prosodic behavior of complex subject phrases in Kichwa, including possessive chains, nested noun phrases, and relative clause modifiers. While the dataset is limited, initial patterns suggest that subject phrases—regardless of their morphosyntactic complexity—do not consistently attract nuclear pitch prominence. Instead, pitch peaks tend to occur on preverbal non-subject elements such as objects or locative expressions. These observations are consistent with a broader prosodic pattern in Kichwa in which subject constituents are often deaccented. However, additional data are needed to confirm whether this pattern holds robustly across speaker variation and discourse contexts.

Key Findings:

- **Subject Backgrounding:**

Complex subjects (e.g., *kanpak mamak wakraka, Ñukak ñañak wawakunaka*) are often introduced with low (%L) or high (%H) boundary tones, but do not receive nuclear pitch accents themselves. This supports their status as topical or presupposed information.

- **Noun-Centered Prominence in Evaluative Constructions:**

In *Ladupi tiyuk runakunak achkuka fiñalladi kan*, the nuclear pitch accent landed on the topic noun "*achkuka*" ('the dog'), despite the presence of a modifying relative clause and scalar adjective. The subsequent rise on *fiñalladi* ('very aggressive') (H-) reflected emphatic or affective shading, not a competing focal center.

General Prosodic Trend:

Even when Kichwa subjects are syntactically elaborate via possessive recursion, modifiers, or relative clauses, they tend to remain prosodically low in pitch, reflecting their non-focal status in the information structure. Nuclear accents consistently appear on elements introducing new, contrastive, or emotionally important information, such as adverbs, locatives, or animate head nouns marked as discourse topics.

Implication:

These findings suggest that in Kichwa, prosodic prominence is influenced by both syntactic structure and informational status. While complex subjects may be syntactically rich, they generally do not receive nuclear pitch accents—particularly when preceded by objects, adverbials, or other preverbal constituents. The data indicate that prosody does not align with syntactic complexity alone; rather, it reflects an interaction between clause structure and informational organization. Constituents that are syntactically preverbal and/or marked for focus tend to receive pitch prominence, whereas subjects, even when complex, are often deaccented. Further analysis is needed to more precisely distinguish the relative contributions of syntax and discourse to pitch alignment in Kichwa.

Section 11

Questions

This section investigates the formation and prosodic realization of interrogative constructions in Salasaka Kichwa, offering a detailed analysis of three main question types: contrastive or topic-oriented questions using the morpheme **-ka**, yes/no questions marked by **-chu** and combination of these with other morphemes like datives and object markers, and Wh-questions. From a morphosyntactic perspective, it examines how the placement of **-chu** and Wh-elements affects scope and interpretation, and how **-ka** functions pragmatically to mark contrastive focus or elliptical inquiry. The analysis also considers how argument scrambling and syntactic flexibility interact with question formation. Crucially, the section emphasizes prosodic structure, drawing on pitch analyses and spectrogram data to show how **-chu** and **-ka** attract pitch accent, suppress competing prosodic peaks, and shape intonational contours at the clause level. These findings provide insight into the interaction of morphology and prosody in encoding information structure and sentence modality in Kichwa.

-ka

11.1) The Interrogative Use and Prosodic Behavior of **-ka** in Kichwa

The morpheme **-ka** in Kichwa is traditionally recognized as a topic marker, primarily used in declarative sentences to emphasize a referent. However, in interrogative contexts, **-ka** functions distinctly, starting a conversation, signaling contrast, continuation, or inquiry regarding an omitted element. Let's consider the prosodic behavior of **-ka** in questions, demonstrating how it contributes to information structure and discourse cohesion in Kichwa.

1.2. The Function of **-ka** in Interrogative Contexts

1.2.1. Contrastive or Contextual Inquiry

Unlike its use in declarative sentences, **-ka** in interrogative constructions serves as a discourse marker that:

- Asks about an alternative or previously mentioned topic (e.g., "What about X?")
- Seeks clarification or continuation of a conversation.

- Introduces contrast with prior discourse (e.g., "You mentioned one thing, but what about this other thing?")

1.2.2. Examples in Natural Discourse

A. Inquiry About a Person's Presence

Context: A speaker arrives at a household looking for a specific individual.

- *Tyankichu?* ("Are you here?")

→ A child appears, prompting the speaker to follow up with:

45)

Mamaka?

3.Q

Mama-ka?

mother-and/where at

'*And your mom?*' / '*Where is your mom?*'

Context Analysis:

Here, **-ka** functions as a shorthand interrogative referencing a previously mentioned topic (the mother). Instead of forming a full question (*Kanpak mama maypitak kan?* "Where is your mom?"), the **-ka** marker suffices to indicate inquiry, relying on discourse context.

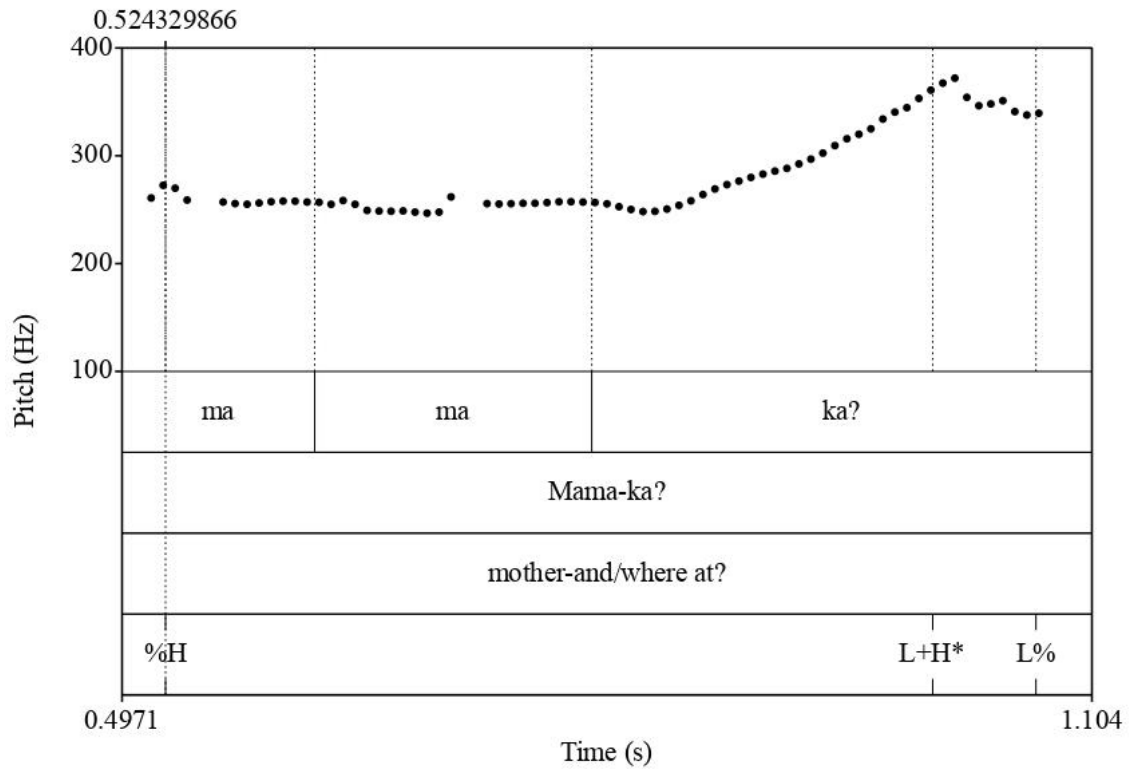


Figure 41: -ka?

Prosodic Structure Analysis:

Intonational Characteristics:

- The utterance begins with a **low boundary tone (%H)**, typical of Kichwa interrogatives.
- The initial portion ("mama") is relatively flat and deaccented.
- A steep **pitch rise on the final syllable ("ka")** aligns with **L+H***, emphasizing the **question force** and focal nature of the locative suffix.
- The prosody highlights the interrogative function, placing emphasis on the unknown locative element rather than the subject.

ToBI-style Analysis:

- **%H** — utterance-initial
- **L+H*** — aligned with the final morpheme "**ka**"
- **L%** – final fall

This pitch pattern is consistent with Kichwa wh-questions, where the interrogative morpheme or element carries the primary prosodic prominence, signaling speaker inquiry and focusing listener attention on the unknown information.

B. Inquiry About a Different Location

Context: A speaker asks for directions.

- *Imalaya Harvardman riy ushani?* ('How do I get to Harvard?')

→ The respondent suggests taking the Red Line.

The speaker follows up with:

46)

Bostonmanka?

4.Q

Boston-man-ka?

Boston-DIR-Q?

'And what about getting to Boston?'

Context Analysis:

The **-ka** suffix here marks a follow-up question, maintaining the same inquiry frame but shifting focus from Harvard to Boston. This illustrates how **-ka** structures sequential discourse by facilitating topic continuity.

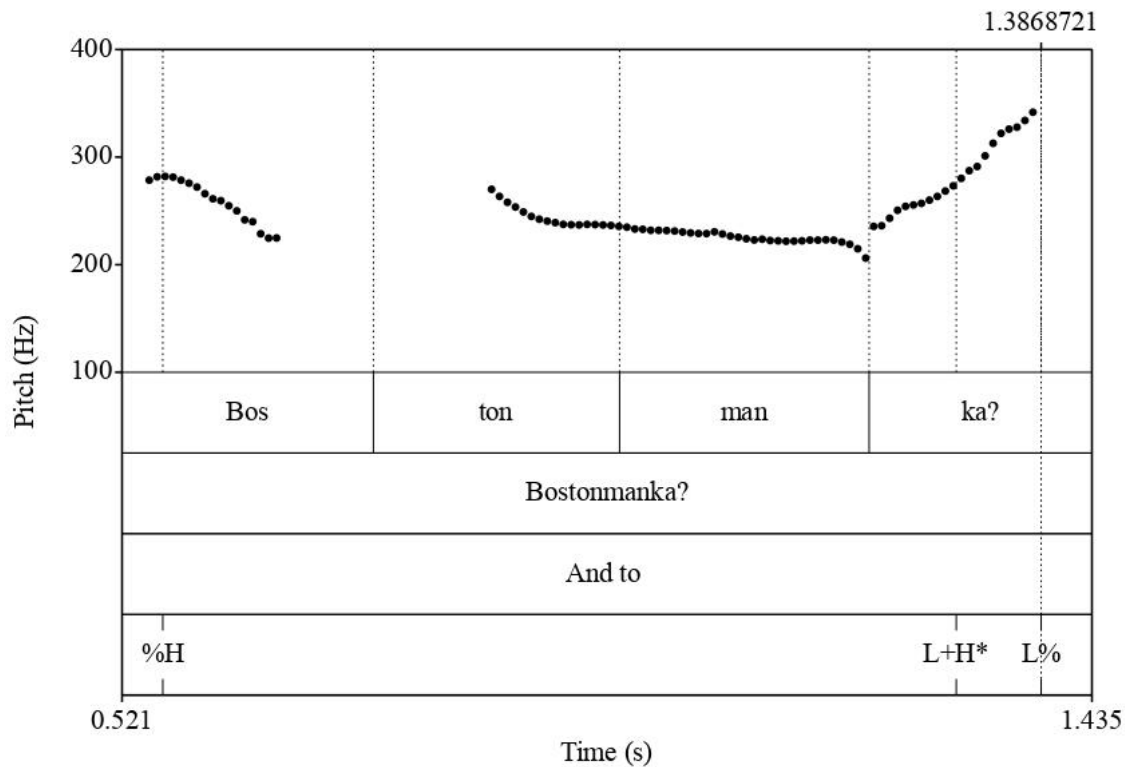


Figure 42: -ka?

Prosodic Structure Analysis:

Prominent Word: The nuclear pitch accent (L+H*) is realized on the interrogative morpheme "ka?", as in other Kichwa content questions. The pitch rise on "ka" highlights its interrogative and focal function, signaling that the speaker is seeking confirmation or clarification about the destination.

Intonational Characteristics:

- The utterance begins with a **high boundary tone (%H)**, marking the start of the question.
- The phrase "Bostonmanka" ('to Boston') is treated as a single phonological unit, with the **rising pitch contour (L+H*)** centered on the **final syllable** where the **interrogative force is expressed**.
- This pattern matches Kichwa **yes/no** or **echo questions**, where **intonation alone**—especially a **final pitch rise**—marks the utterance as **interrogative**.

ToBI-style Analysis:

- %H — utterance-initial
- L+H* — aligned with "ka?"

This pitch pattern reinforces the idea that in Kichwa, intonational cues—especially final rises—play a crucial role in marking questions, even in the absence of wh-words or explicit interrogative particles beyond -ka.

C. Inquiry About an Alternative Action

Context: A person is invited to play at 7 PM, but the host suddenly changes plans to have dinner instead. The invited guest responds:

47)

Pukllunkaka?

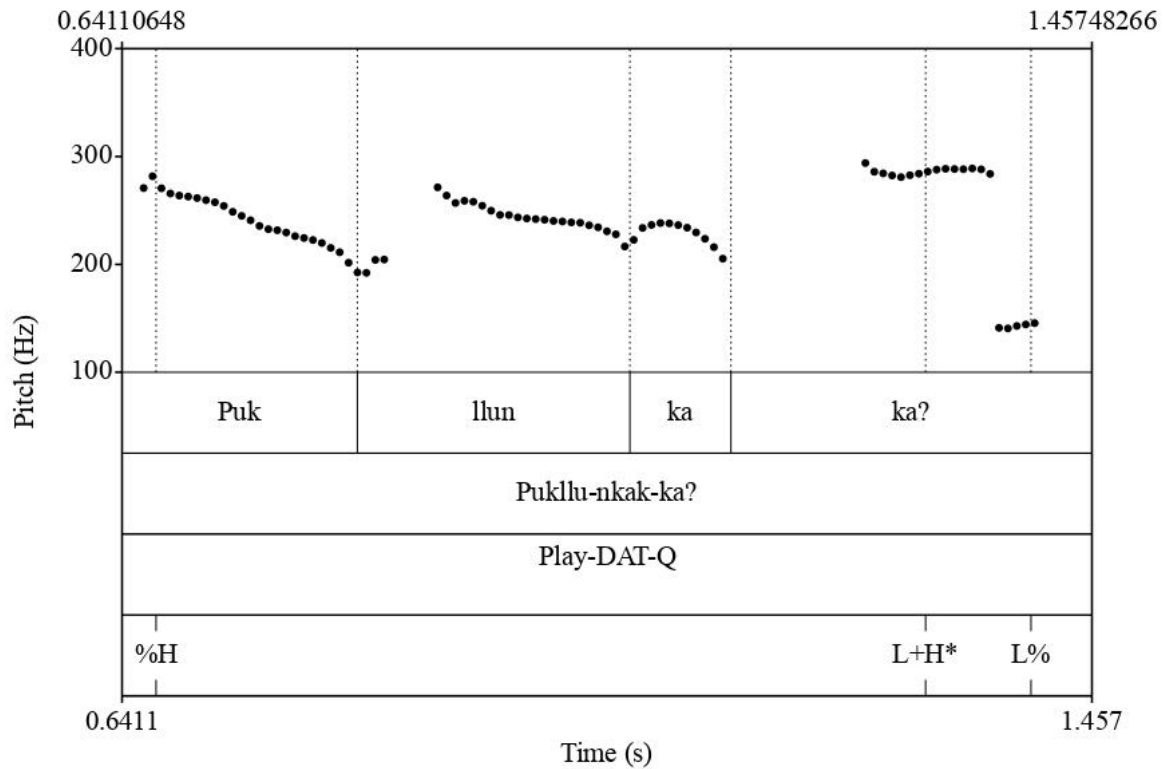
4.Q

Pukllu-nkak-ka?

Play-DAT-Q

‘And what about playing?’

Analysis: In this case, -ka attaches to the dative suffix, signaling contrastive inquiry: “What about the original plan?” / “Are we still playing?” This demonstrates that -ka can mark alternative actions in interrogative contexts.



Prosodic Structure Analysis:

Prominent Word: Even though the pitch track does not clearly show continuous movement due to consonantal interruptions, the nuclear pitch accent (L+H*) is realized on the final interrogative morpheme "ka", which serves as the yes/no question marker. The pitch rise on "ka" signals the interrogative force of the utterance, marking it prosodically as a polar question. However, it is worth noting that while our analysis has primarily focused on nuclear stress, we can also observe secondary prominence on preceding syllables, which may contribute to the overall prosodic contour of the question.

Intonational Characteristics:

- The utterance begins with a **high boundary tone (%H)**, typical of interrogatives in Kichwa.
- The pitch declines steadily across the initial part of the utterance (*pukllunkak*), with no internal pitch accent.
- A **sharp final pitch rise (L+H*)** aligns with the question marker "**ka?**", cueing the listener to the interrogative intent.

- This contour is characteristic of **polar questions** in Kichwa, where **prosodic prominence falls on the final particle or suffix** signaling uncertainty or inquiry.

ToBI-style Analysis:

- %H — utterance-initial
- L+H* — aligned with "**ka?**" (interrogative suffix)

This pitch pattern affirms that Kichwa uses rising contours (L+H*) to encode yes/no questions, and final-syllable pitch rise is a robust prosodic signal of interrogation, even when the rest of the utterance remains flat or declining.

11.1.1). The Prosodic Behavior of Interrogative -ka

A defining characteristic of interrogative **-ka** in Kichwa is its consistent and prominent **prosodic marking**, which distinguishes its interrogative use from its topic-marking role in declarative contexts. Although **-ka** is not a canonical question marker like **-chu**, it can independently signal a question when used in elliptical or contrastive constructions, largely due to its **intonational properties**.

3.1 Pitch Accent and Boundary Tones

Empirical pitch analyses reveal that **interrogative -ka always receives the main pitch accent (L+H*)** of the utterance, regardless of its syntactic position or the number of preceding syllables. This pitch prominence typically aligns with an **L+H*** contour — a low start followed by a sharp rise — on the **-ka** syllable itself.

- If the utterance ends with **-ka**, it is followed by a **falling boundary tone (L%)**, signaling question closure.
- In cases of discourse continuation or follow-up questions, the pitch may end with a **high boundary tone (H%)**, indicating openness or expectancy of further elaboration.

3.2 Context-Specific Prosodic Realizations

A. Inquiry About a Person

Mamaka? ('And what about your mom?')

→ **Prosody**: Rising pitch on **-ka (L+H*)**, followed by **L%**

B. Questioning a Location

Bostonmanka? ('And to Boston?')

→ **Prosody:** High pitch on -ka (L+H*), with possible H% if functioning as a follow-up in an ongoing exchange

C. Contrastive Inquiry on an Action

Pukllunkakka? ('And what about playing?')

→ **Prosody:** L+H* on -ka; a falling boundary (L%) if final, or L+H% if discourse remains open

Across these contexts, **-ka is the sole locus of prosodic focus**, while surrounding material is typically deaccented, even when it contains lexical verbs or nouns. This supports the analysis that -ka functions as a **prosodic and discourse-level operator** rather than merely a suffix.

4. How -ka Signals Interrogativity: A Prosodic-Discourse Explanation

Interrogative -ka differs from standard question particles like **-chu** in that:

1. It does **not require Wh-elements** or verb marking to signal a question.
2. It **behaves like a focus particle**, consistently receiving the utterance's pitch peak.
3. It marks interrogativity through **prosodic prominence alone**, leveraging prior discourse context.

5. Why Does -ka Attract Pitch Accent?

Three converging hypotheses explain -ka's prosodic prominence in questions:

- **Contrastive Focus Hypothesis:**
Interrogative -ka often functions to contrast a new topic with previously stated information, which calls for focused prominence.
- **Information Structure Perspective:**
By forming a minimal interrogative, -ka becomes the **informational center** of the utterance and is assigned default prosodic emphasis.
- **Economy of Expression:**
Since -ka is syntactically minimal yet functionally powerful, it relies on **intonational salience** to convey its interrogative role clearly and efficiently.

Importantly, native speaker intuition suggests that if the pitch peak does **not** align with *-ka*, the utterance is no longer interpreted as a question. Rather than resulting in ungrammaticality, this prosodic shift yields a non-interrogative interpretation, such as a neutral or declarative reading. This confirms that the rising pitch on *-ka* is not optional but central to its interrogative force in Kichwa.

Yes/No questions (-chu)

11.2) The Interrogative Use and Prosodic Behavior of -chu in Kichwa

In Kichwa, the suffix **-chu** is a yes/no interrogative marker. This suffix attaches to different elements in the sentence, affecting the focus and interpretation of the question. Moreover, the prosodic realization of **-chu** exhibits distinct properties, with a significant pitch prominence that differentiates it from declaratives. This section explores the morphosyntactic behavior of **-chu** and its associated intonation in Kichwa yes/no questions.

2. Morphosyntactic Properties of -chu in Kichwa

The suffix **-chu** can be attached to various constituents within the sentence, leading to different scopes of questioning. The variation in placement reflects the information structure, specifically which element is being questioned. Let's consider the following utterance.

Base Declarative Sentence:

48)

Mama millmata awan		
[Mama]	[millmata]	[awan]
2.S	3.O	2.V
Mama	millmata	awa-n
Mother	wool-ACC	knit-3SG
<i>'Mother knits the wool.'</i>		

Context analysis:

This sentence asserts that the subject (*Mama*) is performing the action (*knitting*) on the object (*wool*).

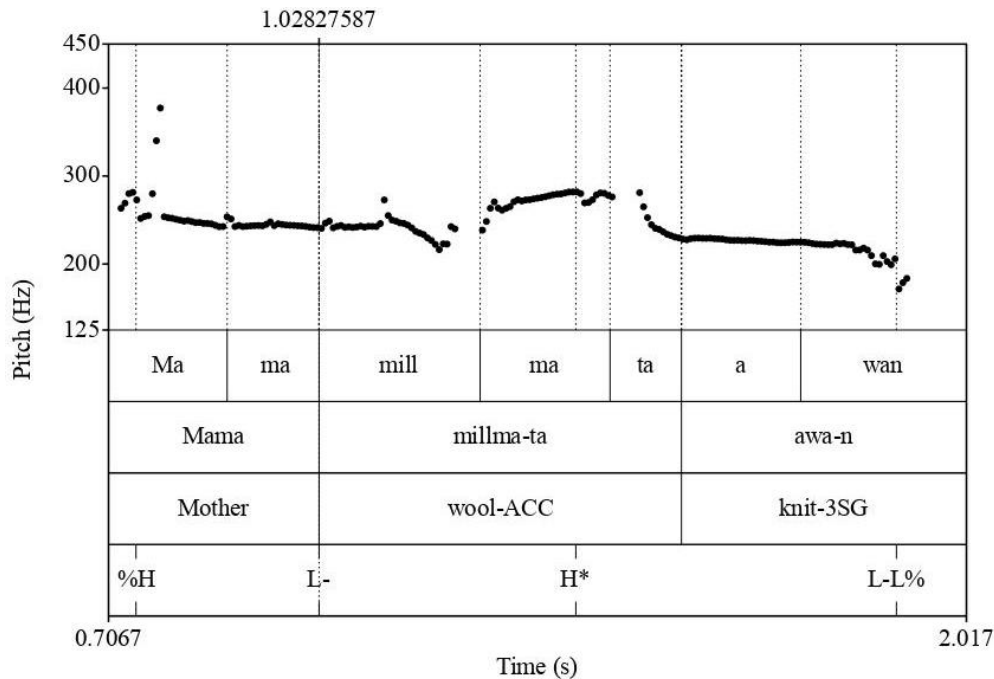


Figure 44: SOV

Prosodic Structure Analysis:

Prominent Word: The object "millmata" ('wool-ACC') carries the nuclear pitch accent (H*), marking it as the informational focus of the utterance. This matches the general pattern in Kichwa where direct objects often receive the pitch peak in neutral declarative sentences.

Intonational Characteristics:

- The utterance begins with a **high boundary tone (%H)** on the subject "**Mama**" ('mother'), indicating the start of a new intonational phrase.
- A **low phrase accent (L-)** follows the subject, maintaining it in the background.
- The pitch rises on "**ta**" in "**millmata**", aligning with **H***, highlighting the object's focus.
- The final verb "**awan**" ('knits') ends with a **falling boundary tone (L-L%)**, marking standard declarative closure.

ToBI-style Analysis:

- **%H** — initial boundary on "**Mama**"
- **L-** — phrase accent following the subject
- **H*** — aligned with "**ta**" in "**millmata**"
- **L-L%** — falling boundary tone on "**awan**"

This pattern confirms that direct objects in Kichwa declaratives typically serve as the prosodic nuclei, especially when they represent new or contrastive information, while subjects remain prosodically subordinate.

Now the same sentence can be considered with the question marker *-chu* added to the verb, subject, and object.

2.1 Sentence-wide Yes/No Question

49)

Mama millmata awanchu?
 [Mama] [millmata] [awan-chu]
 2.S 3.O 2.V-Q
 Mama millma-ta awa-n-chu
 Mother wool-ACC knit-3SG-Q
 'Is Mom knitting the wool?'

Context Analysis:

When *-chu* is attached to the verb, the entire proposition is questioned. The speaker is asking whether the full event—the mother knitting the wool—is true. This is a neutral yes/no question with no particular constituent in focus. The pitch peak occurs on the verb, where *-chu* is located.

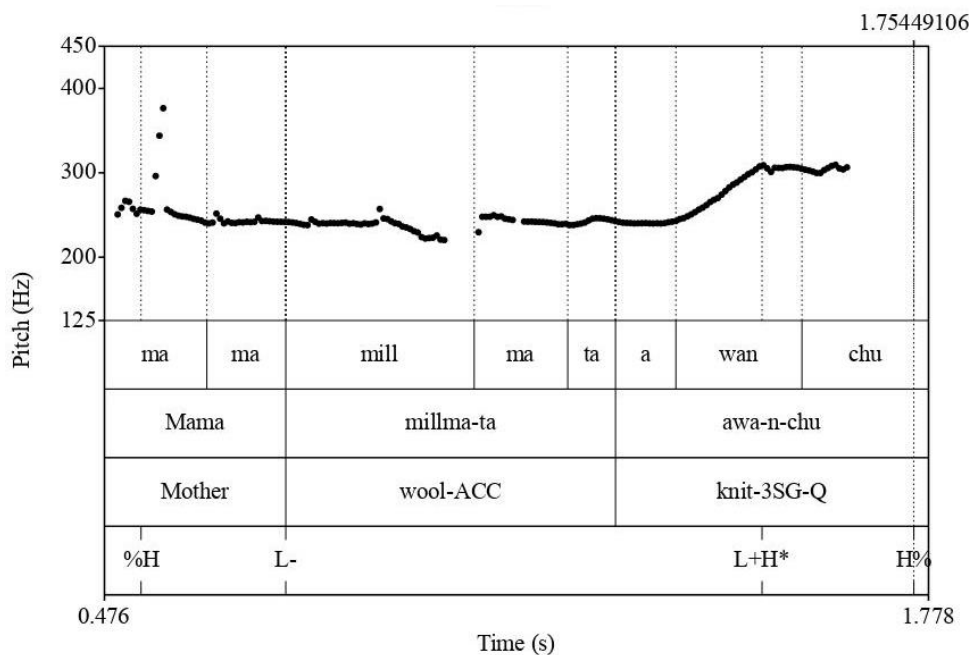


Figure 45: V-chu?

Prosodic Structure Analysis:

Prominent Word: The nuclear pitch accent (L+H*), which conveys interrogative focus, falls on the verb complex "awanchu" ('is knitting?'), specifically aligning with "wan" before the polar question particle -chu. This rise highlights the predicate as the focus of the question, with the final high boundary (H%) reinforcing the interrogative force.

Intonational Characteristics:

- The utterance begins with a **high boundary tone (%H)** on the subject "**Mama**", indicating topical or given information.
- A **low phrase accent (L-)** follows, maintaining the subject in a non-prominent prosodic role.
- A **rising pitch contour (L+H*)** aligns with "**awa**" in the verb "**awanchu**", with **the final suffix -chu confirming the polar question.**
- The **final high boundary tone (H%)** is a clear signal of **yes/no interrogativity** in Kichwa.

ToBI-style Analysis:

- **%H** — utterance-initial on "**Mama**"
- **L-** — following the subject
- **L+H*** — aligned with "**awa**" in "**awanchu**"
- **H%** — boundary tone aligned with final syllable "**chu**"

This prosodic pattern exemplifies how interrogative structure in Kichwa relies on sentence-final rising contours and pitch prominence on the verb, especially when marked by the polar suffix -chu. It contrasts with the declarative version of the same sentence, where pitch prominence falls on the object.

2.2 Subject-Focused Question

50)

Wira mamachu millmata awan?

[Wira mama-chu] [millmata] [awan]

2.S-Q 3.O 2.V

Wira mama-chu millma-ta awa-n

curvy mother-Q wool-ACC knit-3SG

'Is it the curvy mother who is knitting the wool?'

Context Analysis:

This is a **subject-focused yes/no question**, where the particle **-chu** attaches to the subject (*Mama*), highlighting it as the focus of inquiry. The speaker is asking whether *the curvy mother*—as opposed to someone else—is the one performing the action.

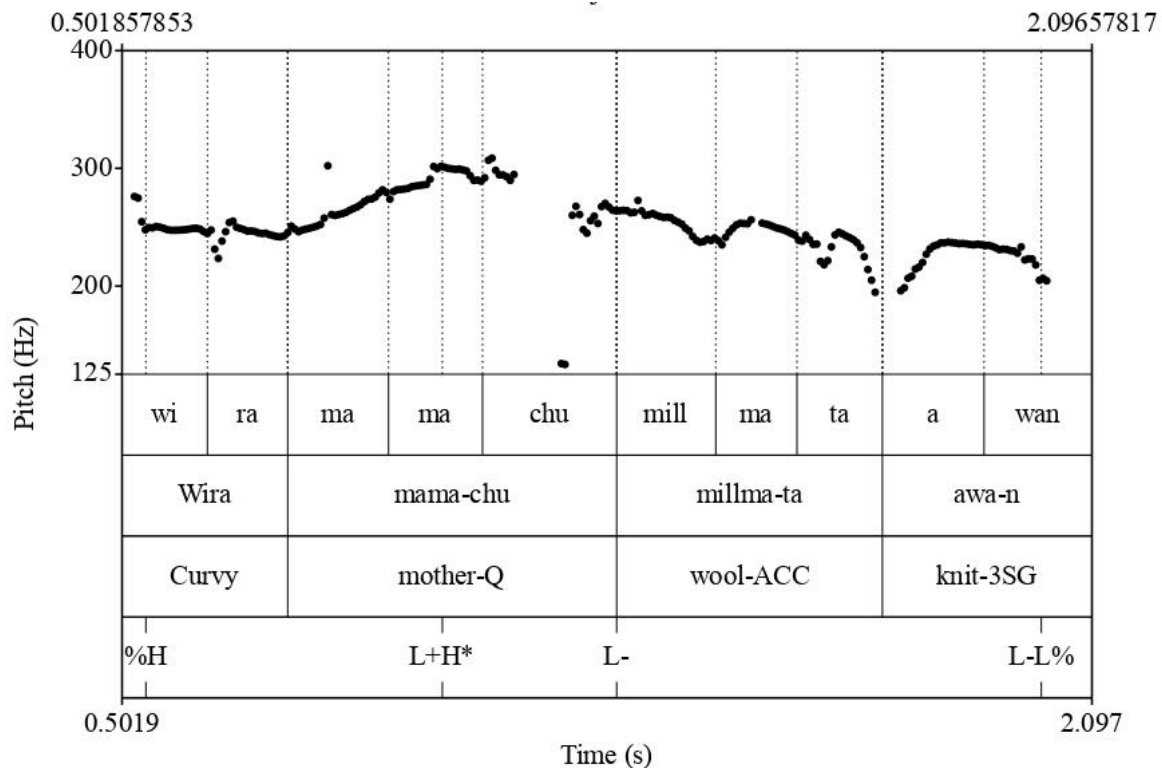


Figure 46: S-chu?

Prosodic Structure Analysis:

Prominent Word: The nuclear pitch accent (L+H*), is realized on "Mama", due to the presence of the interrogative particle -chu directly attached to the subject. This causes a prosodic reanalysis in which the subject becomes the focal target of the question, a structure often used for subject focus or disambiguation.

Intonational Characteristics:

- **Highest pitch peak** is aligned with "ma" in "mama", consistent with the L+H* annotation.
- The **adjective "wira"** has a relatively high but flat contour—no pitch prominence.

- "chu" (the polar question marker) shows a pitch drop following the peak, supporting the boundary tone L-.
- The object "millmata" and verb "awan" are fully deaccented, continuing the L- L-L% contour of the post-nuclear material.

ToBI-style Analysis:

- %H – at the beginning “Wira”
- L+H*— aligned with "Mama" in "Mama-chu"
- L- — on the object "millmata"
- H% — sentence-final rise on the verb "awan"

This pitch pattern demonstrates a shift in focus alignment: instead of the verb or object receiving the nuclear pitch accent (as in more neutral interrogatives), the subject is questioned, and this is reflected in the early pitch prominence. This confirms that in Kichwa, pitch can shift to mark contrastive or focalized elements, even when they appear early in the utterance, especially when accompanied by morphemes like -chu.

2.3 Object-Focused Question

51)

Mama millmatachu awan?
 [Mama] [millmata-chu] [awan]
 2.S 3.O-Q 2.V
 Mama millma-ta-chu awa-n
 Mother wool-ACC-Q knit-3SG
'Is it the wool that Mom is knitting?'

Context Analysis:

In this variant, **-chu** attaches to the object, shifting focus to the item being acted upon. The speaker is questioning whether *wool* is indeed the thing being knitted. This form is appropriate when there is an assumption that a different object might be involved.

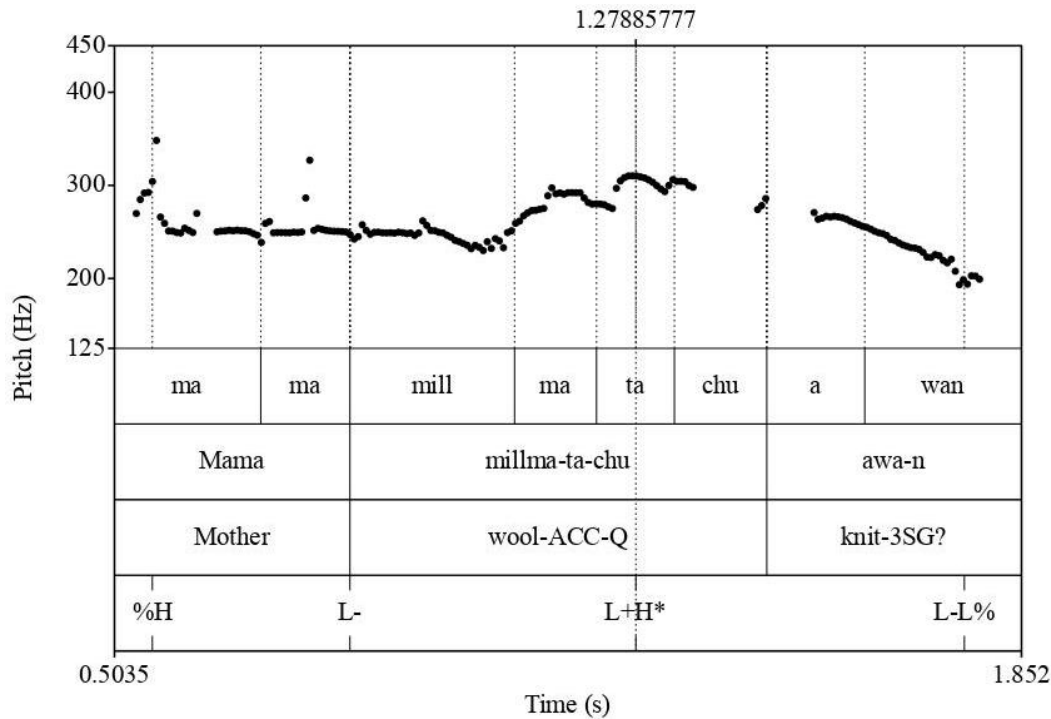


Figure 47: O-chu?

Prosodic Structure Analysis:

Prominent Word: The nuclear pitch accent (L+H*) falls on the object "millmatachu" ('wool-ACC-Q'), with a clear pitch rise aligned to the interrogative morpheme -chu. This suggests that the focus of the question is on the object, rather than the action or subject, emphasizing contrastive or identificational focus on what is being knitted.

Intonational Characteristics:

- The utterance begins with a **high boundary tone (%H)** on the subject "Mama", signaling known or topical information.
- A **low phrase accent (L-)** follows on the subject.
- The **pitch rises sharply on "ta" in "millmatachu"**, aligning with L+H* on the **object-Q structure**. This prosodic peak indicates that the object is being questioned.
- The verb "awan" ('knits') concludes with a **falling boundary tone (L-L%)**, showing declarative closure with question force resolved earlier in the clause.

ToBI-style Analysis:

- **%H** — on "Mama" (utterance-initial)

- L- — following the subject
- L+H* — aligned with "ta" in "millmatachu"
- L-L% — final fall on the verb "awan"

This structure confirms that in Kichwa, -chu attached to the object triggers a shift in nuclear prominence, making the object the focus of the polar question. The rise-fall contour across the object and verb reflects the syntactic target of the inquiry, supporting the broader pattern that interrogative morphemes direct prosodic focus to their associated constituents.

11.4) Interaction of Suffix-Induced Pitch Peaks: -chu, -wan, and Default Object Focus

In previous sections, we described how the question marker **-chu** triggers a prosodic pitch peak on the word it attaches to. We also noted that **-wan**, the instrumental suffix, induces a similar pitch peak behavior independently. The present section explores how these suffixes interact with each other and with the default prosodic pattern, which places a pitch peak on the object (or its modifier) in the absence of any special morphemes.

To address these interactions, a set of test utterances was constructed based on the following declarative sentence which won't be deeply analysed as it will show the same findings as in Section 3:

52)

Mama millmata wankuwan awan
 [Mama] [millmata] [wankuwan] [awan]
 2.S 3.O 3.INST.P 2.V
 Mama millma-ta wanku-wan awa-n
 Mother wool-ACC knitting.tool-INST knit-3SG
'Mother knits the wool with a knitting tool.'

Context Analysis

This sentence presents a simple declarative statement describing a common or habitual action. The subject "Mama" ('mother') performs the action of knitting. The direct object "millmata" ('the wool') specifies what is being knitted, while the instrumental phrase "wankuwan" ('with a knitting tool') details the means by which the action is carried out.

The utterance may reflect either a routine activity or serve as a narrative description, where emphasis could fall on the object to highlight what is being knitted, especially in contrast to

other possible items or tools. It conveys a clear and informationally balanced clause, with no overt markers of focus or contrast, but the structure is open to prosodic reinterpretation depending on speaker intention (e.g., focus on the object vs. the tool).

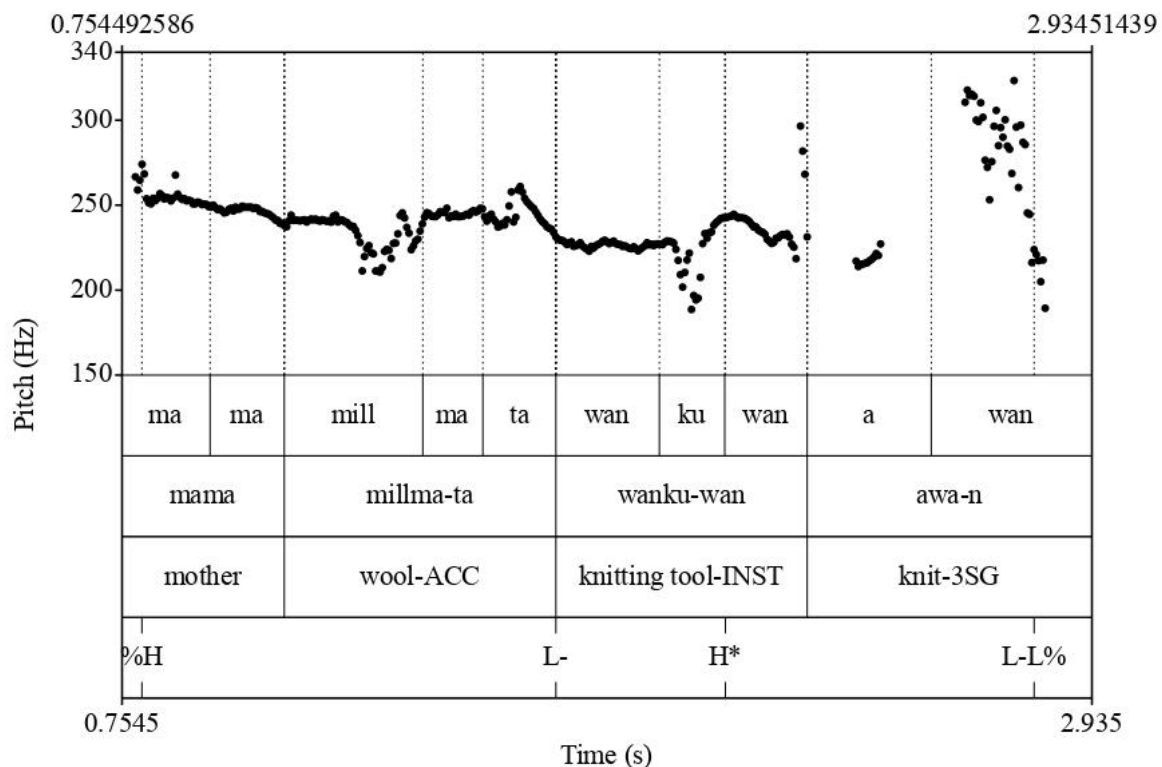


Figure 48:-O-wan

Prosodic Structure Analysis:

Prominent Word: In this example, the instrumental phrase "wankuwan" ('with the knitting tool') bears the nuclear pitch accent (H*), as shown by the sharp pitch rise on "gu", part of the root *wangu*. This suggests that the instrumental phrase is the prosodic focus of the sentence.

Intonational Characteristics:

- The utterance begins with a **high boundary tone (%H)** on the subject "**Mama**", indicating the start of the intonational phrase.
- A **low phrase accent (L-)** follows the subject and continues through the object "**millmata**" ('wool-ACC'), which remains prosodically backgrounded.
- The pitch rises steeply on "**wankuwan**", aligning the nuclear accent with the instrumental phrase.

- The verb "**awan**" ('knits') concludes the sentence with a **falling boundary tone (L-L%)**, consistent with declarative intonation in Kichwa.

ToBI-style Analysis:

- **%H** — utterance-initial on "Mama"
- **L-** — after the subject and continuing through the object
- **H*** — aligned with "**gu**" in "wankuwan"
- **L-L%** — final fall on "awan"

This pitch pattern shows a shift in prosodic prominence compared to the previous sentence where "millmata" (the object) received the pitch peak. In this case, the instrumental phrase "wankuwan" attracts the nuclear accent, suggesting that it carries the informational focus—perhaps because the knitting tool is new, contrastive, or emphasized in the discourse context.

11.5) When (V)-chu and -wan Co-occur

The previous sentence is now expanded by incorporating adjectives and transforming it into a question, allowing us to examine how multiple modifiers influence pitch realization.

53)

Mama yana millmata maywa wankuwan awanchu?

[Mama] [yana millmata] [maywa wankuwan] [awanchu]

2.S 2.Adj 3.O 2.Adj 3.INST.P 2.V-Q

Mama yana millma-ta maywa wanku-wan awa-n-chu

Mother black wool-ACC purple knitting.tool-INST knit-3SG-Q

'Is Mom knitting the black wool with the purple knitting tool?'

Context Analysis:

This yes/no question asks whether the mother is knitting black wool using a purple knitting tool. The inclusion of two color adjectives (yana 'black', maywa 'purple') adds contrast, suggesting the speaker is confirming or clarifying a specific event or detail. The question form (-chu) marks the utterance as seeking confirmation.

Prosodic Structure Analysis:

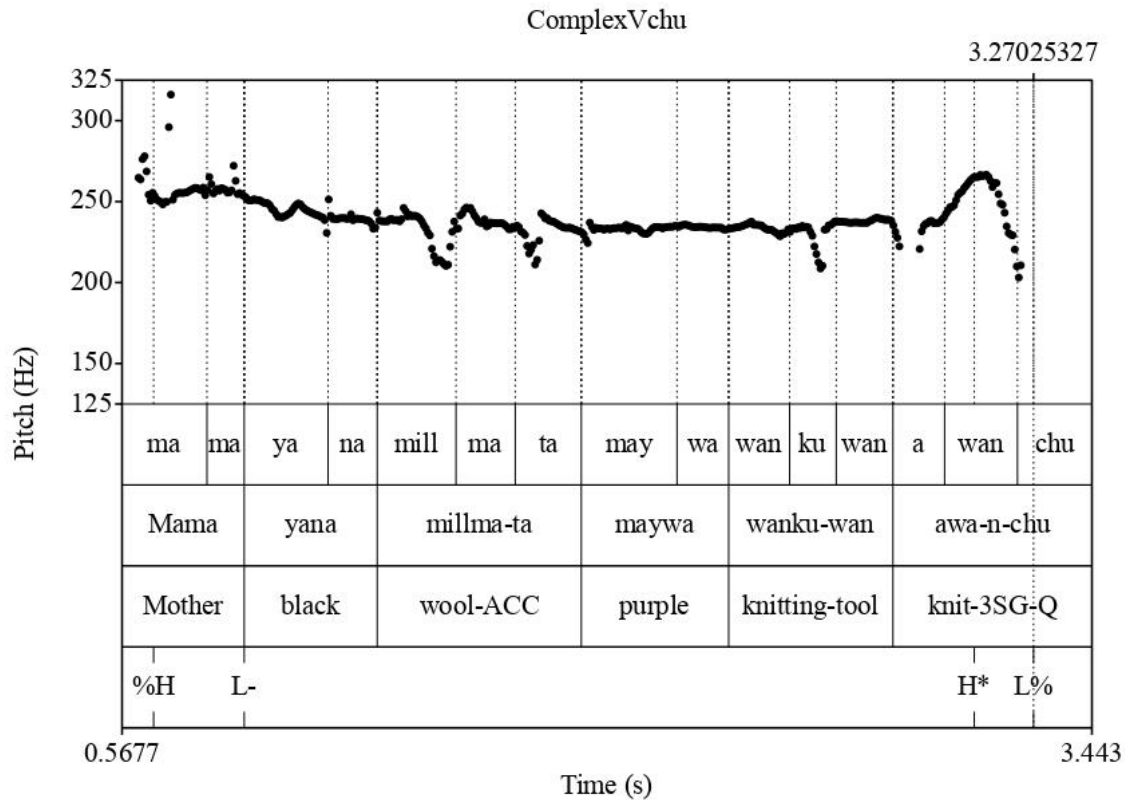


Figure 49:-chu,-wan

Prominent Word: The nuclear pitch accent (H*) is aligned with the verb "awan" ('knit'), immediately before the question marker -chu. The final morpheme -chu triggers a high boundary tone (H%), characteristic of yes/no questions in Kichwa.

Intonational Characteristics:

- The utterance begins with a high boundary tone (%H) and a low phrase accent (L-) following the subject "Mama".
- The pitch contour remains relatively flat through the adjectival and object phrases ("yana millmata maywa wankuwan").
- A clear rise (H*) occurs on the verb root "awa", followed by an H% on -chu, marking interrogative force.

ToBI-style Analysis:

- %H — on "Mama"
- L- — spans through "millmata wankuwan"
- H* — on "awa"
- H% — on "-chu"

This pitch configuration confirms that in yes/no interrogatives, the question marker *-chu* reliably attracts final rising intonation (H%), while the verb carries the nuclear pitch accent, especially in structurally dense clauses.

11.6) When (Subject)-*chu* and *-wan* Co-occur

We now turn to the same example where **-chu** is introduced in the subject.

54)

Mamachu yana millmata maywa wankuwan awan
 [Mamachu] [yana millmata] [maywa wankuwan] [awan]
 2.S-Q 2.Adj 3.O 2.Adj 3.INST.P 2.V
 Mama-chu yana millma-ta maywa wanku-wan awa-n
 Mother-Q black wool-ACC purple knitting.tool-INST knit-3SG
 ‘Is it the mother who knits the black wool with the purple knitting tool?’

Context Analysis:

This sentence conveys a yes/no question that centers on the identity of the subject, "mamachu" ('mother-Q'), asking whether *she* is the one performing the action. The question marker *-chu* is attached to the subject "mama", placing contrastive or identificational focus on the agent. This differs from previous examples where *-chu* was clause-final. The rest of the utterance describes a familiar knitting scenario, but the placement of *-chu* shifts the interrogative force to the subject, implying alternative possibilities (e.g., someone else may be knitting). This structure highlights subject focus through morphosyntax and intonation.

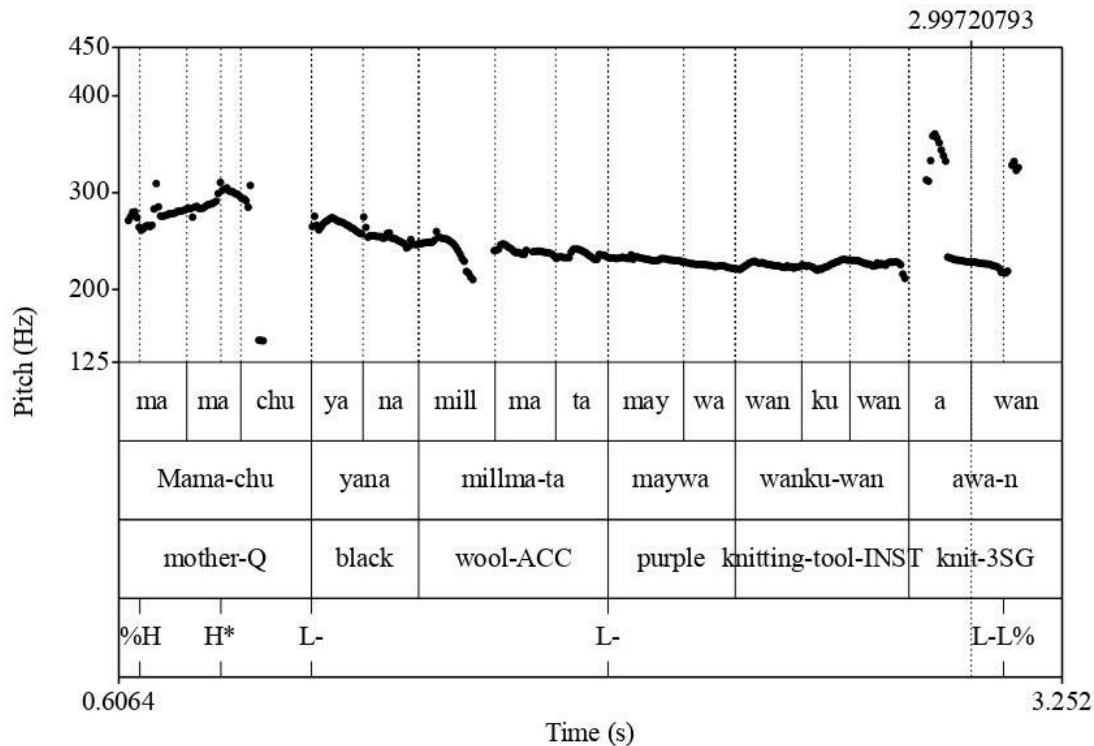


Figure 50: -chu,-wan

Prosodic Structure Analysis:

- **Prominent Word:** The highest pitch peak (H*) is aligned with *-chu* in the subject phrase *Mama-chu*, highlighting the subject as the focal interrogative element.
- **Pitch Alignment:** The early pitch rise and prominence on *-chu* confirms that subject marking with *-chu* triggers nuclear pitch accent, overriding prominence on object or instrumental phrases.
- **Intonational Characteristics:**
 - %H — utterance begins with a high boundary tone on *Mama*
 - H* — aligned with *-chu*, signaling the subject as focus
 - L- — after the subject and through the remainder of the utterance
 - L-L% — falling boundary tone at the end of the verb *awan*, typical of polar questions in Kichwa when no final rise is realized

This example supports a key finding in Kichwa prosody: when *-chu* is attached to the subject, it attracts nuclear prominence (H*), shifting the prosodic focus to the agent. This contrasts with earlier cases where *-chu* on the verb or object controlled pitch accent. The prosody here

reflects a subject-identifying question structure, consistent with the informational weight placed on the agent's role in the action.

11.7) When **-chu** (Object) and **-wan** Co-occur

Building on this comparison, the following example illustrates the prosodic effect of placing **-chu** on the object:

55)

Mama yana millmatachu maywa wankuwan awan
[Mama] [yana millmatachu] [maywa wankuwan] [awan]
2.S 2.Adj 3.O-Q 2.Adj 3.INST.P 2.V
Mama yana millma-ta-chu maywa wanku-wan awa-n
Mother black wool-ACC-Q purple knitting.tool-INST knit-3SG
'Is it the black wool that Mom knits with the purple knitting tool?'

Context Analysis:

This sentence frames a narrow focus polar question by attaching *-chu* to the object *millmata* ('the wool'), thereby questioning its role specifically. It conveys: "*Is it the black wool that the mother is knitting with the purple knitting tool?*" This construction presupposes that the mother is knitting and asks whether the *black wool* is the item being used.

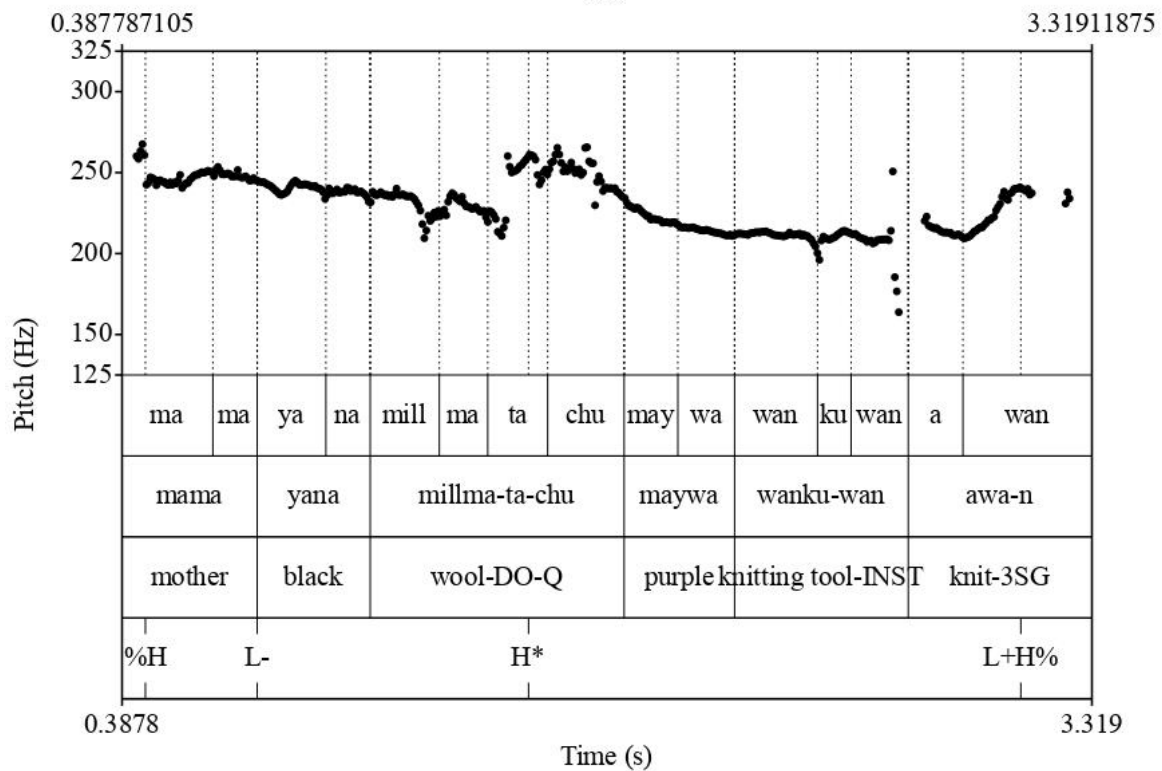


Figure 51: -chu,-wan

Prosodic Structure Analysis:

- **Prominent Word:** The pitch peak (H*) is clearly realized on *millmatachu*, the object. The presence of *-chu* strongly attracts prosodic prominence, shifting the nucleus from the instrumental phrase (e.g., *wankuwan*) to the object.
- **Pitch Contour:**
 - %H — high boundary tone at utterance onset (on *Mama*)
 - L- — low phrase accent across *yana*
 - H* — peak pitch aligned with *-chu* in *millmatachu*, emphasizing focus
 - L+H% — rising boundary tone at sentence-final verb *awan*, signaling question force

ToBI-style Analysis:

- %H — on “Mama”
- L- — across “yana”
- H* — on “millmatachu”
- L+H% — on “awan”

This sentence exemplifies how *-chu* placed on the **object** asserts informational focus through pitch prominence, shifting the prosodic nucleus away from post-verbal elements (e.g., instruments). This pattern complements earlier findings that *-chu* functions as a strong pitch attractor regardless of syntactic position, demonstrating how focus morphemes in Kichwa condition prosodic structure.

11.8) When O+ (INST.P)-*chu* Co-occur

56)

Mama yana millmata maywa wankuwanchu awan

[Mama] [yana millmata] [maywa wankuwanchu] [awan]

2.S 2.Adj 3.O 2.Adj 3.INST.P-Q 2.V

Mama yana millma-ta maywa wanku-wan-chu awa-n

Mother black wool-ACC purple knitting.tool-INST-Q knit-3SG

'Is it with the purple knitting tool that Mom knits the black wool?'

Context Analysis:

This polar question places focus on the **instrumental phrase**—*maywa wankuwanchu* ('with the purple knitting tool'). The speaker assumes the knitting action is occurring and seeks to confirm whether the *instrument/tool used* is indeed the purple one. The enclitic *-chu* on the instrumental phrase flags it as the scope of interrogation, making the means of the action the central concern.

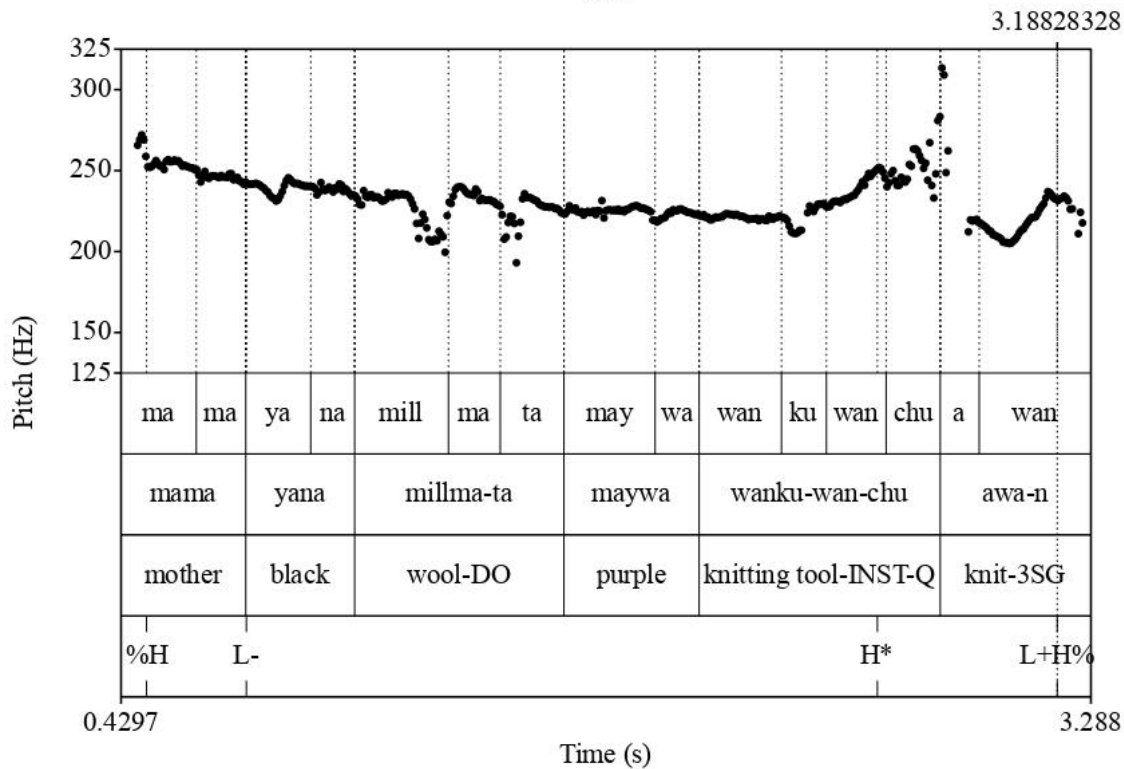


Figure 52: *INST.P+-chu*

Prosodic Structure Analysis:

- **Prominent Word:** The nuclear pitch accent (H*) is aligned with *wankuwanchu* ('with the knitting tool' marked with -chu). This confirms that -chu, even when attached to an instrumental phrase, dominates prosodic prominence. None of the preceding constituents—not the object *millmata*, nor the adjective *maywa*—reach a comparable pitch height.
- **Intonational Characteristics:**
 - The utterance begins with a **high boundary tone (%H)** on the subject *Mama*.
 - A **low phrase accent (L-)** follows across *yana millmata*.
 - A **sharp rise (H)*** aligns with the **-chu** morpheme in *wankuwanchu*.
 - The verb *awan* ends with a **rising final boundary tone (L+H%)**, consistent with polar (yes/no) questions in Kichwa intonation.

ToBI-style Analysis:

- %H — on "mama"
- L- — after "yana millmata"
- H* — aligned with "-chu" in "wankuwanchu"
- L+H% — at the end of the utterance, on "awan"

This sentence reinforces the broader generalization that *-chu*, when used in polar questions, consistently triggers nuclear pitch accent, regardless of its syntactic position. Even when it co-occurs with other potentially prominent morphemes—such as *-wan* (instrumental)—*chu* attracts the pitch peak. This behavior supports the idea that interrogative morphemes in Kichwa function similarly to morphologically marked focus elements (e.g., *-mi*), drawing prosodic prominence not because of their syntactic role, but due to their discourse-related function. In this way, *-chu* exemplifies how prosodic structure in Kichwa is shaped by the informational status encoded by morphemes, rather than linear word order alone.

11.9) When (V)-*chu* and *-wan* Co-occur and the verb is moved after the subject

57)

Mama awanchu yana millmata maywa wankuwan

[Mama] [awanchu] [yana millmata] [maywa wankuwan]

2.S 2.V-Q 2.Adj. 3.O 2.Adj 3.INST.P

Mama awa-n-chu yana millma-ta maywa wanku-wan

Mother knit-3SG-Q black wool-ACC purple knitting.tool-INST

'Is Mom knitting the black wool with the purple knitting tool?'

Context Analysis:

This utterance is a polar question focused on confirming or clarifying an ongoing or habitual action. The sentence inquires whether *Mom* is performing the activity of knitting using a specific set of tools and materials—*black wool* and a *purple knitting tool*. The verb *awanchu* ('is she knitting?'), marked with the question particle *-chu*, appears immediately after the subject, making it the syntactic and pragmatic focus. The remaining elements—*millmata* (wool), *maywa* (purple), and *wankuwan* (with knitting tool)—serve to detail the circumstances of the action but are presented postverbally, suggesting they are backgrounded or already known to the interlocutor. This structure supports a reading in which the speaker is checking the truth of the event, with the main informational focus encoded in the verb's polarity.

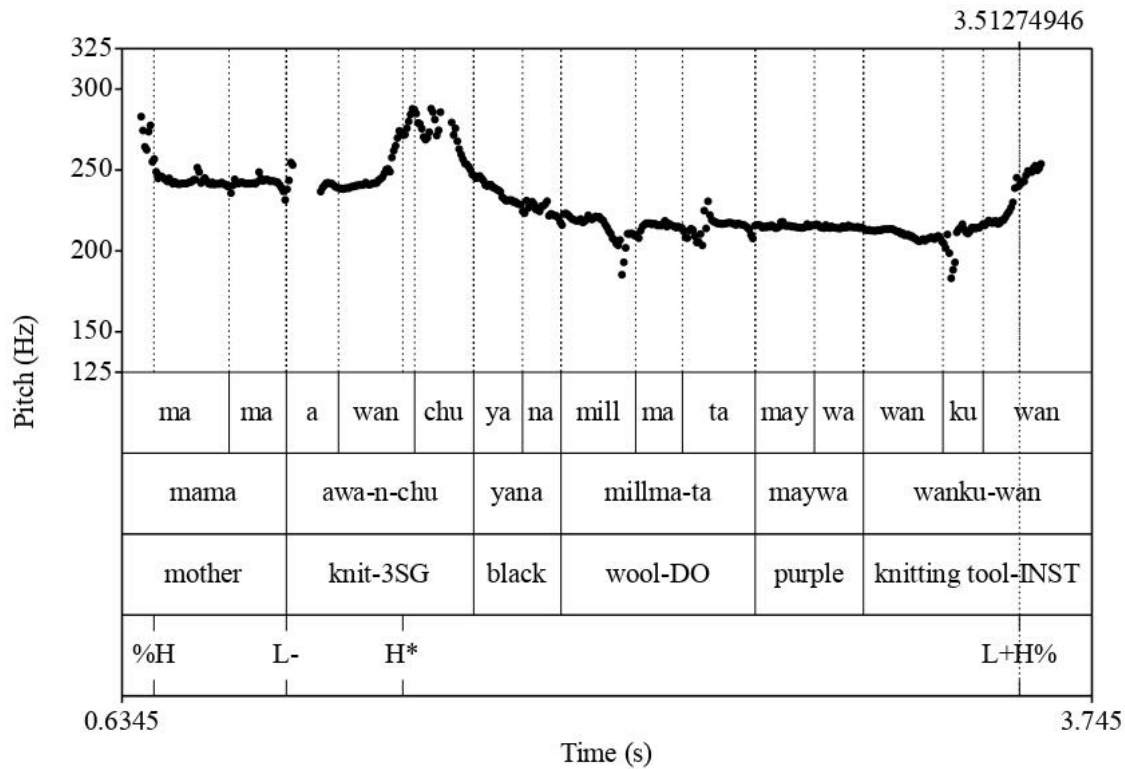


Figure 53: -chu, -wan

Prosodic Structure Analysis:

- **Pitch Accent and Prominence:**

The pitch contour displays a sharp rise (H*) on **awanchu** (knit-3SG-Q), indicating that the verb, marked with the interrogative morpheme **-chu**, receives nuclear pitch prominence. This aligns with the interrogative force of the utterance, where the polarity of the action (whether or not it is happening) is questioned.

- **Intonational Characteristics:**

- The utterance begins with a high boundary tone (%H) and descends gradually into a low phrase accent (L-).
- The **verb phrase** carries the peak (H*), indicating its focal status in the question structure.
- The final rise to **L+H%** on the instrumental phrase *wankuwan* ('with the knitting tool') reinforces the rising contour typically found in polar questions in Salasaka Kichwa.

ToBI-style Analysis:

- %H — high boundary tone at the start
- L- — low phrase accent before the verb

- H* — aligned with the verb+Q suffix (*awa-n-chu*)
- L+H% — rising final boundary on the last constituent (*wankuwan*)

This pattern shows that when *-chu* appears on the verb in polar questions, the main pitch peak shifts to the verb. Other elements that follow the verb may still show smaller pitch rises, possibly reflecting subtle discourse or speaker-related effects.

11.10) Summary of Findings

The data reveal a clear hierarchy in suffix-induced pitch prominence:

- **-chu is always prominent:** When it is present, the word bearing *-chu* receives the pitch peak, regardless of syntactic position or co-occurrence with other pitch-bearing suffixes.
- **-wan triggers pitch, but only when -chu is absent.**
- **Default object prominence disappears** in the presence of either suffix.
- In cases with adjectives:
 - When no suffix is present, the pitch peak lands on the **first adjective** of the object.
 - If *-wan* is present, the peak shifts to the **instrument**, not the object or its adjectives.
 - If *-chu* is present on any element, it **neutralizes** the effect of other peaks.

These findings support the idea that Kichwa prosody includes **morphologically triggered pitch assignment**, and that certain morphemes (*-chu*, *-wan*) override default prominence rules. We propose the following provisional ranking for prosodic competition:

-chu > -wan > default object-focus

This ranking allows us to predict peak placement in complex sentences and provides a principled explanation for the deletion of expected default or secondary peaks.

Pitch Behavior of the Dative Marker *-man* in *-chu* Interrogatives

To investigate whether the dative morpheme *-man* in Kichwa behaves prosodically like other suffixes such as *-wan*(instrumental), we analyzed pitch patterns in a sentence where *-man* is attached to a modified noun:

58)

Ñuka wira mamaman yana muruta kurkani
[Ñuka] [wira mamaman] [yana muruta] [kurkani]
2.S 2.Adj 3.DAT 2.Adj 3.O 1.V
Ñuka wira mama-man yana muru-ta ku-rka-ni
I curvy mother-DIR black grain-ACC give-PST-1SG
'I gave the black grain to the curvy mama.'

Context Analysis:

The dative argument *mamaman* ('to the curvy mother') is modified by the adjective *wira* ('curvy'), and the direct object *muruta* ('the grain') is modified by *yana* ('black'). Despite both arguments being complex, the nuclear pitch accent (H*) aligns with the dative noun *mamaman*, confirming the earlier observation that dative-marked constituents consistently receive prosodic prominence, even in competition with modified accusative objects. This reinforces the idea that dative arguments in Kichwa, like instrumentals, serve as prosodic anchors regardless of syntactic or lexical complexity elsewhere in the clause.

When (V)-chu and -man Co-occur

The question particle **-chu**, when used in Kichwa polar and content questions, is well known for inducing a pitch peak on the constituent to which it attaches. However, further evidence from our data shows that **-chu** does more than simply introduce a local pitch rise: it exerts a global prosodic effect, overriding the default pitch accent system and suppressing all other lexical or suffix-induced pitch peaks in the utterance.

To test this, a sentence was created in which **-chu** was independently attached to different constituents within the same syntactic frame:

59)

Ñukachu wira mamaman yana muruta kurkani
[Ñukachu] [wira mamaman] [yana muruta] [kurkanichu]
2.S 2.Adj 3.DAT 2.Adj 3.O 4.V
Ñuka-chu wira mama-man yana muru-ta ku-rka-ni
I-Q curvy mother-DIR black grain-ACC give-PST-1SG
'Did I give the black grain to the curvy mama?.'

We produced four question variants with **-chu** attached to:

1. the subject (*Ñuka-chu*),
2. the dative noun (*mamaman-chu*),
3. the object (*muruta-chu*), and
4. the verb (*kurkani-chu*).

Across all variants, the pitch analysis revealed a consistent pattern: regardless of the attachment site, *-chu* causes all other constituents to flatten prosodically, and the only pitch peak appears on the syllable bearing *-chu*.

This behavior stands in contrast to the pitch patterns associated with other morphemes such as *-wan* or the default object-focus strategy. Whereas *-wan* induces a pitch peak on the noun stem it attaches to (and suppresses object-focus), and default prosody favors the first adjective of the object, *-chu* erases these distinctions.

We propose that *-chu* functions as a prosodic operator at the utterance level, introducing a single prosodic prominence (a high pitch target) that aligns with the interrogative operator's scope. Once *-chu* is present, no other pitch accents are realized — even if they would otherwise be predicted by morphosyntactic or discourse-based rules.

This behavior aligns with cross-linguistic findings in prosodic phonology where interrogative particles or operators serve as intonational foci, demanding exclusive pitch prominence (cf. Pierrehumbert & Hirschberg 1990; Truckenbrodt 2007).

We summarize this behavior as follows:

- *-chu* triggers a unique, clause-level *H* pitch target.*
- All other pitch peaks — whether from suffixes like *-wan* or default focus rules — are deleted or suppressed.
- The peak aligns with the word hosting *-chu*, regardless of syntactic position.

11.3) The Interrogative Use and Prosodic Behavior of *wh* question words in Kichwa

In Kichwa, *wh*-questions are formed using interrogative words such as *ima* (what), *ima-pak* (for what), *ima-manta* (why), *ima-shina/ima-shpa* (how), *ima-wra* (when), and *pi-tak* (who).

2. Formation of Wh-Questions in Kichwa

To begin our examination of question formation, let us first revisit the constituent order patterns observed in the declarative sentences analyzed previously. As established, the Salasaka variety of Kichwa permits flexible word order in ditransitive constructions involving an instrumental phrase, with the base configurations generally alternating between:

- A. **S–O–INST.P–V** (Subject – Object – Instrumental Phrase – Verb)
- B. **S–INST.P–O–V** (Subject – Instrumental Phrase – Object – Verb)

In both configurations, the instrumental phrase (INST.P) demonstrates positional flexibility relative to the direct object (O). Whether the instrumental appears before or after the object, the sentence retains the same propositional meaning, with no change in truth conditions or role assignment. Thus, the syntactic structure reflects a relatively free constituent order between objects and instrumental phrases — an instance of **argument order flexibility** without affecting semantic interpretation.

The canonical declarative sentence used for analysis is:

60)

- a) **Mama yana millmata maywa wanguwan awan**
 [Mama] [yana millmata] [maywa wanguwan] [awan]
 2.S 2.Adj. 3.O 2.Adj. 3.INST.P. 2.V
 Mama yana millma-ta maywa wangu-wan awa-n
 Mother black wool-ACC purple knitting.tool-INST knit-3SG
'Mother knits the black wool with a purple knitting tool.'

This sentence can alternate to:

- b) **Mama maywa wanguwan yana millmata awan**
 [Mama] [maywa wanguwan] [yana millmata] [awan]
 2.S 2.Adj. 3.INST.P. 2.Adj. 3.O 2.V
 Mama maywa wangu-wan yana millma-ta awa-n
 Mother purple knitting.tool-INST black wool-ACC knit-3SG
'Mother knits the black wool with a purple knitting tool.'

without any change in meaning, suggesting a **pragmatically neutral scrambling** between the internal arguments (object and instrument phrase).

WH-Question Formation

Kichwa exhibits **in-situ Wh-question formation**: Wh-words typically remain in their argument position within the sentence, rather than undergoing overt movement to a fronted position. However, some **local scrambling** of Wh-phrases relative to other arguments is possible, with syntactic restrictions.

The Wh-questions based on the base sentence are formed as follows:

(i) Object WH-Question: imata=what?

("What is mother knitting with a purple knitting tool?")

61)

Imata mama maywa wankuwan awan?

[Imata] [Mama] [maywa wankuwan] [awan]

3.What 2.S 2.Adj 3.INST.P 2.V

Ima-ta mama maywa wanku-wan awa-n?

What-ACC mother purple knitting.tool-INST knit-3SG

'What does mother knit with a purple knitting tool?'

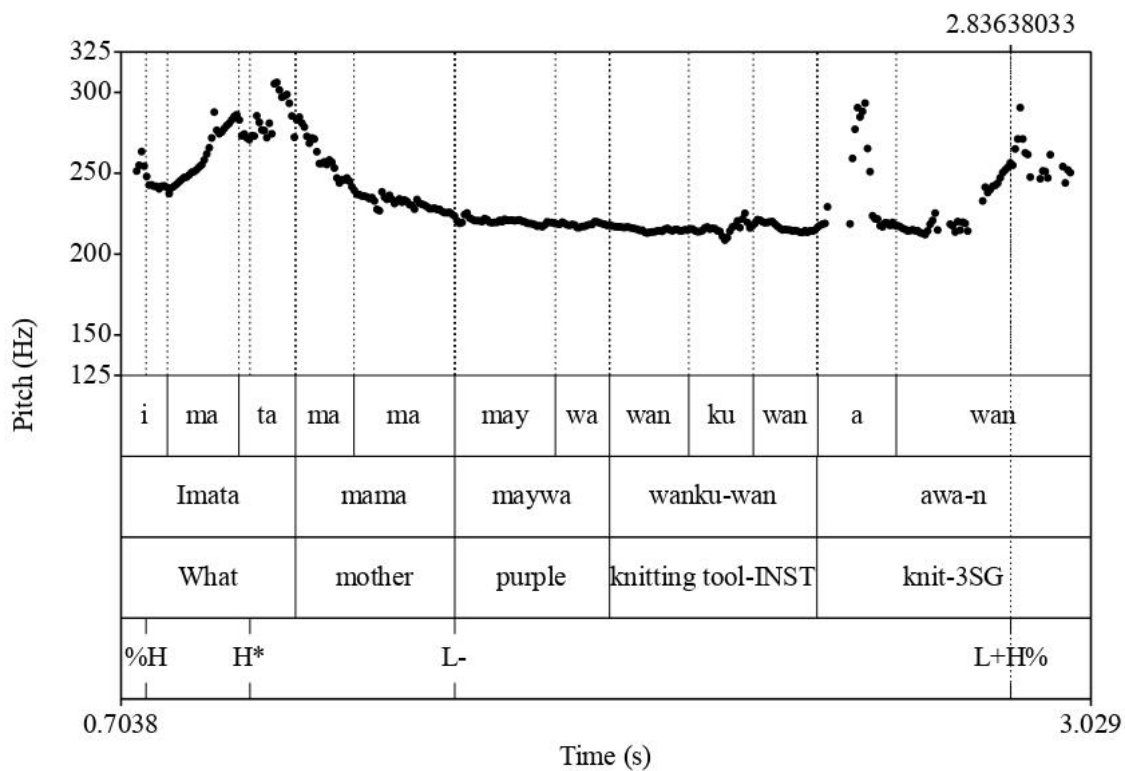


Figure 54: wh?

Kichwa allows both in-situ and fronted wh-question formation, depending on the syntactic and prosodic context. In example (57), the wh-word *imata* appears preposed — suggesting that wh-fronting is at least optional. This contradicts a strict in-situ analysis and indicates that wh-phrases may undergo fronting for pragmatic or syntactic reasons.

- **Pitch Accent and Prominence:**

The interrogative word *imata* ('what') carries the highest pitch peak (H*), as expected in content (wh-) questions. This aligns with the focus function of wh-words in Kichwa, which attract nuclear stress early in the sentence.

- **Intonational Characteristics:**

- The utterance opens with a high boundary tone (%H), followed by a prominent rise (H*) on *imata*.
- A low phrase accent (L-) follows across *mama maywa*, showing backgrounded or non-focused status.
- The sentence ends with a rising boundary tone (L+H%) on *awan*, which is typical of Kichwa interrogative intonation patterns and marks the clause as a question.

ToBI-style Analysis:

- %H — high boundary tone at sentence onset
- H* — aligned with *imata*, marking focal prominence
- L- — across *mama maywa*, indicating downstepped material
- L+H% — final rising boundary on *awan*, signaling interrogativity

This structure shows a canonical Kichwa wh-question contour, where the interrogative word receives the nuclear pitch accent, and a final rise reinforces the interrogative force of the clause.

Alternate allowed orders:

62)

- Mama imata maywa wanguwan awan?**
- Mama maywa wanguwan imata awan?** (echo-question)

Crucially, the Wh-word cannot move across the verb (*awan*). It cannot appear after *awan*.

(ii) Instrumental Phrase WH-Question: Imawan=What with?

("With what is mother knitting the black wool?")

63)

Imawan mama yana millmata awan?

[Imawan] [mama] [yana millmata] [awan]

3.Q 2.S 2.Adj 3.O 2.V

Imawan mama yana millmata awan?

What-INST mother black wool-ACC knit-3SG

'What is mother knitting the black wool With?'

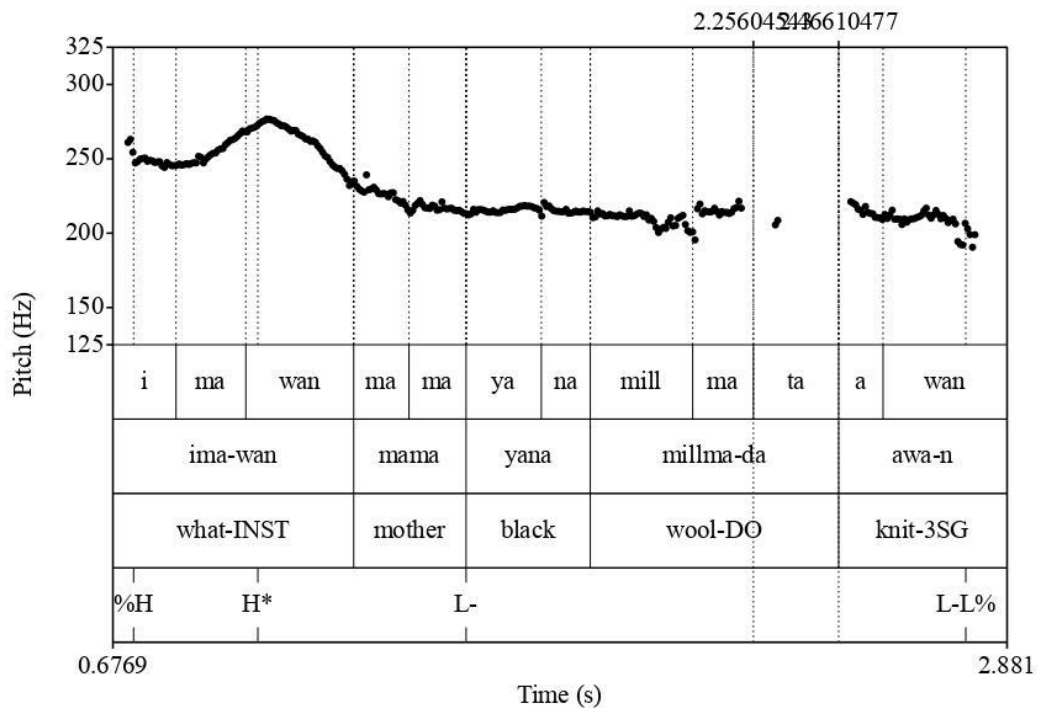


Figure 55: Wh?

In example (59), the wh-word *imawan* ('with what') appears at the beginning of the sentence, preceding the subject *mama*. This position contrasts with the canonical post-object placement of instrumental phrases in declaratives, indicating that **wh-fronting is used in Salasaka Kichwa** for instrumental questions. The high pitch accent (H*) on *imawan* further supports its role as the prosodic focus of the utterance.

- **Pitch Accent and Prominence:**

The nuclear pitch accent (H*) falls on *ima* in *imawan* ('with what'), confirming its role as the focus of the question. This aligns with the pattern in Kichwa interrogatives where the wh-element carries the highest prominence.

- **Intonational Characteristics:**

- The utterance begins with a high boundary tone (%H) and quickly rises to a peak (H*) on *ima*, signaling the focus.
- A low phrase accent (L-) spans the following subject (*mama*) and adjective (*yana*), reflecting their backgrounded status.
- The verb (*awan*) closes the clause with a low boundary tone (L-L%), consistent with declarative-final contours—even in wh-questions.

ToBI-style Analysis:

- %H — utterance-initial high boundary
- H* — on *ima*, the wh-focus
- L- — spans *mama* through *millmada*
- L-L% — final low tone on *awan*

This pattern reinforces the central role of wh-elements like *ima* as prosodic nuclei in Kichwa interrogatives, with the rest of the utterance forming a supportive background structure. This aligns with the behavior observed for polar question marker *-chu*, which similarly attracts the nuclear pitch accent regardless of position. Together, these patterns suggest that in Kichwa, interrogative elements—whether wh-words or polar suffixes—systematically condition prosodic prominence.

Alternate orders allowed:

64)

- Mama imawan yana millmata awan?**
- Mama yana millmata imawan awan?** (echo-question)

Once again, *imawan* cannot appear postverbally.

(iii) Subject WH-Question: Pitak=Who?

("Who is knitting the black wool with the purple knitting tool?")

65)

Pitak millmata maywa wanguwan awan?

[Pitak] [millmata] [maywa wanguwan] [awan]

2.Who 3.O 2.Adj 3.INST.P 2.V

Pi-tak millma-ta maywa wangu-wan awa-n?

Who-Q mother black wool-ACC purple knitting.tool-INST knit-3SG

'Who is knitting the black wool with a purple knitting tool?'

Context Analysis:

In this case, *pitak* (who) replaces the subject *Mama*. The Wh-word remains in preverbal subject position, conforming to the general SOV word order of Kichwa.

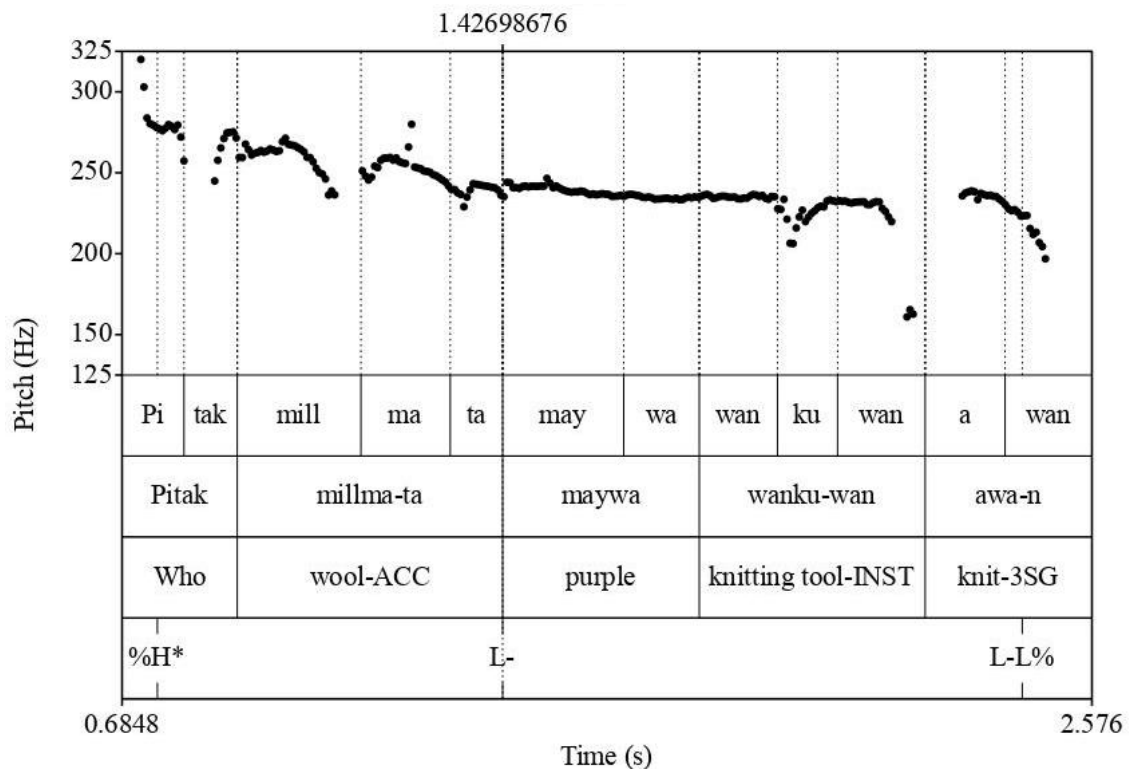


Figure 56: Wh?

Prosodic Structure Analysis:

1. Initial Pitch Accent (%H*) on “Pitak”

- The utterance begins with a **high initial pitch accent** on the interrogative word **"Pitak" (who)**, annotated with %H*.
- This aligns with common intonation patterns across languages where **wh-words receive early prominence**.
- The high pitch peak on "Pitak" reflects **focus and information-seeking** function.
- There is a **phrase break** after "millma-ta" ('wool-ACC'), marked by L-.
- This prosodic boundary separates the **interrogative focus** from the rest of the sentence, segmenting the object from the instrumental and verb.

2. Declining Pitch Across the Rest of the Sentence

- After the pitch peak on “Pitak,” there is a **gradual pitch decline** across “maywa wanku-wan awa-n.”
- This downward slope is typical of **non-focused post-nuclear material**, suggesting **post-focal compression**.

3. Final Low Boundary Tone (L-L%)

- The utterance ends with **L-L%**, marking **utterance-finality** and confirming the **question structure is wh-initial, not yes/no**.
- No rise at the end further reinforces that this is a **wh-question**, not an interrogative with -chu.

Constraints on Wh-movement

The data presented here suggest that wh-phrases in Salasaka Kichwa consistently appear in the preverbal domain, and cannot be extraposed postverbally. Sentences such as:

66)

***awan imata?**
 awa-n ima-ta?
 knit-3SG what-ACC?
knit what?

or

***awan imawan?**
 awa-n ima-wan?
 knit-3SG what-INST?
knit with what?

are ungrammatical, confirming a strong syntactic constraint that wh-phrases must remain to the left of the verb.

In the available examples, wh-phrases are fronted to the sentence-initial position and consistently marked with high pitch prominence (H*), indicating a correlation between focus and fronting. However, since these examples primarily involve focused wh-phrases, they do not provide conclusive evidence for in-situ wh-question formation as a default strategy.

While it is likely that Kichwa permits local scrambling of *wh*-phrases within the preverbal field, and that fronting may be pragmatically motivated, further data from neutral discourse contexts (e.g., non-contrastive, broad-focus questions) are needed to confirm whether in-situ realization is truly the default. In this respect, Kichwa resembles other head-final languages (e.g., Japanese), where *wh*-fronting is optional and information-structure-driven, but more systematic testing is required.

Summary of Findings

This section investigated the formation and prosodic realization of *wh*-questions in Salasaka Kichwa, revealing consistent syntactic and intonational patterns:

1. Wh-Phrase Position and Word Order

- **In-situ Realization:** *Wh*-words (e.g., *imata*, *imawan*, *pitak*) typically remain at the beginning of the sentences even though they do not undergo obligatory fronting. They can also be placed after the subject.
- **Preverbal Constraint:** All *wh*-phrases must appear in the preverbal domain; postverbal *wh*-phrases (e.g., *awan imata?*) are ungrammatical or echo questions.
- **Flexible Scrambling:** Some variation is allowed in constituent order within the preverbal field (e.g., S–O–INST.P–V vs. S–INST.P–O–V), including *wh*-phrases, without altering meaning or grammaticality.

2. Pitch Accent and Prosodic Focus

- **Consistent H on Wh-Elements H*:** Across all question types (object, instrumental, subject), the *wh*-word consistently attracts the nuclear pitch accent (H*), marking it as the prosodic focus of the utterance.
- **%H Utterance Onset:** Each *wh*-question begins with a high boundary tone (%H), creating a salient pitch rise on the interrogative.
- **L-L% or L+H% Closure:**
 - *Wh*-questions typically end with **L-L%** (falling tone) for subject/object/instrumental questions, reflecting standard declarative closure.
 - **L+H%** (rising tone) occurs when the *wh*-word is followed by interrogative morphology like *-chu*, signaling a yes/no question-like contour at the end.

3. Prosodic-Structural Alignment

- **Syntactic Focus Aligns with Intonational Prominence:** The position and function of the *wh*-word determine the location of the pitch peak (e.g., on *ima-* in *imawan*, or on *pi-* in *pitak*).
- **Backgrounded Material:** Non-*wh* arguments (e.g., *mama*, *millmata*) typically follow with compressed or downstepped pitch (L-), reflecting their lower information status.

4. Syntactic and Prosodic Constraints

- **Syntactic Limits:** While Kichwa allows flexible ordering between object and instrumental arguments in both declaratives and *wh*-questions, verbs anchor the right edge of *wh*-domains—*wh*-phrases must not follow the verb.
- **Pragmatic Scrambling:** Changes in *wh*-phrase position are pragmatically driven (e.g., for emphasis), not required by grammar.
- **Cross-linguistic Parallel:** This behavior is consistent with other head-final languages like Japanese, which also exhibit in-situ *wh*-structures.

Conclusion:

Kichwa *wh*-questions maintain syntactic flexibility in argument order but strictly preserve the preverbal placement of interrogative words. Prosodically, the *wh*-element invariably receives nuclear prominence (H*), and sentence-final contours mark clause type—typically L-L% for *wh*-questions and L+H% for yes/no questions. This pattern parallels what we observed with the polar question marker *-chu*, which also consistently draws the main pitch peak, regardless of its position. Taken together, these findings suggest that Kichwa interrogatives are governed by an utterance-level prosodic constraint: each question assigns nuclear prominence to a single interrogative element, whether it is a *wh*-word or a morphosyntactic marker like *-chu*.

Additional Evidence: Pitch Tracks for In-Situ Wh-Phrases

While most examples presented above show *wh*-elements in sentence-initial position, suggesting a preference for fronting, further pitch evidence confirms that in-situ realization of *wh*-phrases is prosodically viable in Salasaka Kichwa. Consider the sentence:

67)

Mama imata maywa wanku-wan awan?

Mama imata maywa wanku-wan awan?

2.S 3.Q. 2.Adj 3.INST.P. 2.V

Mama imata maywa wanku-wan awa-n?

Mother what purple knitting.tool-INST knit-3SG?

'What is mother knitting with the purple knitting tool?'

Here, *imata* appears in an in-situ object position, following the subject *mama*. In the pitch track, the nuclear pitch accent (H*) is still clearly aligned with *imata*, despite its non-initial placement. This shows that wh-phrases retain their prosodic prominence regardless of position, confirming that pitch focus aligns with the information-seeking element, not its linear order.

Similarly, in the variant:

Mama maywa wanku-wan imata awan?

(echo-question interpretation)

the pitch peak again falls on **imata**, now sentence-final. However, this structure behaves more like an **echo question**, and the final rise (L+H%) may reflect its special discourse status rather than canonical wh-question prosody.

Together, these examples show that prosodic realization (H*) on wh-elements is robust, even in non-fronted, in-situ positions. This supports the idea that Kichwa allows both fronted and in-situ wh-phrases, with pitch prominence tracking focus rather than position. However, in-situ wh-elements still respect the preverbal constraint, confirming that they must remain within the preverbal domain.

In order to better illustrate the interaction between word order, prosody, and grammaticality in Kichwa wh-questions, we can compare several representative configurations involving the wh-word *imata* ('what'):

1. **Fronted WH (Initial Position)**

Sentence: *Imata mama maywa wankuwan awan?*

- The wh-word *imata* appears at the beginning of the sentence, preceding the subject and all other arguments.
- This structure is fully **grammatical**.
- The **nuclear pitch accent (H*)** falls on *imata*.
- The final verb *awan* bears a falling or rising boundary tone depending on intonation.

- This is a **canonical wh-question**.

2. In-Situ WH (Preverbal, Post-Subject)

Sentence: *Mama imata maywa wankuwan awan?*

- Here, *imata* appears after the subject *mama*, but still within the preverbal domain.
- This order is also **grammatical** and naturally occurring.
- The **pitch peak (H*)** still aligns with *imata*, indicating that it remains the prosodic focus.
- This is likewise a **well-formed wh-question**, and supports the claim that **Kichwa allows in-situ wh-phrases as long as they are preverbal**.

3. Rightmost WH (End of Preverbal Field)

Sentence: *Mama maywa wankuwan imata awan?*

- The wh-word appears at the very end of the preverbal domain, just before the verb.
- This structure is **acceptable** but typically interpreted as an **echo question** (e.g., when repeating or seeking clarification).
- The **pitch peak** again aligns with *imata*, maintaining its prosodic focus.
- However, the **intonation** may shift slightly depending on discourse context.

4. Postverbal WH (Ungrammatical)

Sentence: *Awan imata?*

- In this case, the wh-word appears **after the verb**.
- This structure is **ungrammatical** in Salasaka Kichwa and not attested in natural usage.
- There is **no pitch prominence** on *imata*, and the structure violates the preverbal constraint on wh-phrases.
- Such constructions are rejected by native speakers.

These examples reinforce two key findings:

- The **nuclear pitch accent (H*)** consistently falls on the **wh-word**, regardless of its linear position (as long as it remains preverbal).
- There is a **strict syntactic constraint** prohibiting wh-phrases from appearing **postverbally**, unlike some languages that allow extraposition.

This confirms that pitch prominence and syntactic position interact tightly: while H* consistently marks the wh-word, word order is constrained by syntactic structure, preventing postverbal extraposition. These pitch track patterns reinforce the earlier generalization that Kichwa wh-questions combine flexible focus-driven ordering with strict syntactic boundaries.

Generalized Prosodic Hierarchy in Kichwa Sentences

Summary of Salasaka Kichwa Prosody

This summary outlines the prosodic hierarchy observed across a range of syntactic structures in Salasaka Kichwa, as determined by pitch prominence in both declarative and imperative utterances. The analysis draws on naturalistic and elicited data, with special attention to the interaction between word order, morphological complexity (e.g., adjectives, instrumental phrases, dative objects), and focus-marking morphemes (e.g., *-mi*, *-chu*). The general pattern reveals that pitch prominence tends to fall on the final major constituent of the verb phrase (VP), unless disrupted by focus morphology or prosodic competition. The list below proceeds from simpler to more structurally complex constructions, reflecting how prosodic peaks shift depending on syntactic constituency, argument type, and modifier presence.

Based on the observed patterns, we can establish the following **hierarchy of prosodic prominence** in Kichwa:

1. Basic Structures

- SV
- SOV

2. Adjectival Modification (Subject, Object, Instrumental)

- S – Adj + O – V
- Adj + S – O – V
- Adj + S – Adj + O – V
- S – 1Adj + 2Adj + O – V
- S – 1Adj + 2Adj + 3Adj + O – V

3. Ditransitives and Instrumental Phrases

- S – IO – DO – V
- S – O – IO – V
- S – INST.P – V
- S – Adj + INST.P – V
- Adj + S – INST.P – V

- Adj + S – Adj + INST.P – V
- 2Adj + S – INST.P – V

4. Imperatives (With and Without Subject)

- (S) – O – V (IMP)
- S – INST.P – V (IMP)
- (S) – O – Adj + INST.P – V (IMP)
- (S) – Adj + O – INST.P – V (IMP)
- (S) – Adj + O – Adj + INST.P – V (IMP)
- S – O – INST.P – V (IMP)

5. Adverbial Sequences

- S – Adv – V
- S – Adv – O – V
- S – 1Adv + 2Adv – O – V

6. Other Notable Constructions

- S – O – INST.P – V
- S – O – INST.P – V (IMP)

7. Interrogatives and Prosodic Alignment

- Wh-questions: Wh-elements
- Yes/No questions: σ -*chu*
- -ka: -ka

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