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## Shiwilu (Jebero)


Pilar Valenzuela

*Chapman University*, valenzuela@chapman.edu

Carlos Gussenhoven

*Radboud University Nijmegen*

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# Shiwilu (Jebero)

## **Comments**

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**Pilar M. Valenzuela**Chapman University, Orange, CA  
*valenzuela@chapman.edu***Carlos Gussenhoven**Radboud University Nijmegen  
& Queen Mary University of London  
*c.gussenhoven@let.ru.nl*

Shiwilu (a.k.a. Jebero) is a critically endangered language from Peruvian Amazonia and one of the two members of the Kawapanan linguistic family. Most of its nearly 30 remaining fluent speakers live in and around the village of Jeberos (District of Jeberos, Province of Alto Amazonas, Loreto Region), at approximately 5° S, 75° W.

The documentation of Shiwilu is scarce and no survey grammar is available. Until very recently, the only trained linguist who had worked on Shiwilu was John Bendor-Samuel, who carried out fieldwork in 1955–1956 and completed a doctoral thesis in 1958 (see Bendor-Samuel 1981 [1958]). An abridged version of the thesis, which includes an outline of the phonology, was published as Bendor-Samuel (1961). Whereas recent publications have focused on the social position of the Shiwilu language (Valenzuela 2010), morpho-syntactic aspects (Valenzuela 2011), and a formal demonstration of its family affiliation with the Shawi language (a.k.a. Chayahuita) (Valenzuela Bismarck 2011), the present article is the first account of its sound system since the work by Bendor-Samuel.

Our work has been made possible thanks to the generous collaboration of Mrs. Emérita Guerra Acho (speaker E) and Mr. Meneleo Careajano Chota (speaker M), to whom we are very grateful. Born in Jeberos in 1935 and 1940, respectively, Mrs. Emérita and Mr. Meneleo grew up speaking Shiwilu at home and were first exposed to Spanish while attending elementary school in their native village.<sup>1</sup>

<sup>1</sup> This study took place in the context of a three-year language documentation project (supported by NSF grant DEL 0853281). The data were collected during several field stays in the town of Jeberos and the neighbouring city of Yurimaguas, with some dedicated data collection and recording in February of 2010 and January of 2011, using a Zoom H4n (16-bit wav) digital recorder and a Shure WH30 XLR condenser headset microphone. Most words and phrases were elicited in isolation, whereas the story of the North Wind and the Sun was recorded in seven sections, each of which was briefly related to Mr. Meneleo Careajano in Spanish and then retold by him in his own words.

## Consonants

There are 17 consonants, as in the chart below.

	Labial	Alveolar	Palatal	Velar	Glottal
Plosive	p	t		k	ʔ
Affricate			tʃ		
Nasal	m	n	ɲ		
Fricative		s	ʃ		
Trill		r ʔr			
Lateral approximant		l	ʎ		
Approximant	w	ø	j		

Keywords are given as phonemic transcriptions, with syllable boundaries indicated by dots (full stops) and stress by ['].

p	ˈpən	‘fire’
t	tuʔ.ˈtuʔ.pi	‘knee’
k	ˈkən.ma	‘2SG’
tʃ	ˈtʃək	‘straight’
ʔ	ˈkən.maʔ	‘indigenous person’
s	ˈsa.mər	‘fish’
ʃ	ˈʃaʔ.wən	‘squirrel monkey’
m	ˈmər.pi	‘belly’
n	ˈna.na	‘that’
ɲ	ɲi.ɲiʔ.wa	‘dog’
r	ˈu.ru	‘deer’
ʔr	ˈməʔr.pi	‘ripe’
l	a.ˈliʔ.la	‘another’
ʎ	i.ˈʎa.pa	‘shotgun’ (Quechua loan)
w	wa.ˈwa.sər	‘baby’
ø	i.ˈøi.mu.nan	‘blanket’
j	i.ˈja.øk	‘fat’

There is a marginal [h], which we only came across in [ahã], an affirmative interjection. Before describing the detailed pronunciation of these segments, we provide a description of the syllable structure.

## Syllable structure

The general syllable structure is (C)(C)V(C), with both onsets and codas being optional. It would appear that all consonants except /ʔ/ and /ʔr/ can occur in the onset; /r/ can only be an onset word-internally. CC-onsets are virtually restricted to /kw/, as in /kwa/ ‘1SG’, /kwa.ɲi/ ‘type of meal’ (Spanish loan, *juane*). /pw/ is a marginal onset occurring in /pwi.ɲu/ ‘water jar’ (Quechua loan). Syllable contractions may produce other combinations with /w/. Except for /ʔ/ and /ʔr/, intervocalic single consonants are onsets, as in /ˈa.wa/ ‘mother’, /ˈlu.paʔ/ ‘land’. Word-internally, /ʔ/ and /ʔr/ remain codas, as in /paʔ.ˈa.waʔ/ ‘so that we (INCL.) go’, /wəʔr.ˈan/ ‘having got lost.3SG’ (for the realization of these consonants, see section ‘Detailed pronunciation of consonants’ below).

**Table 1** Legitimate word-final VC structures.

	k	n	r	<sup>?</sup> r	ʔ
ə	+	+	+	+	—
i	+	+	+	—	+
u	+	+	<i>rare</i>	<i>rare</i>	+
a	+	+	<i>rare</i>	—	+

The vowel /ə/ must be followed by a coda consonant. Accordingly, intervocalic consonants after /e/ geminate, regardless of the position of the stressed syllable, as in /'kək.ki/ 'sun', /ðək.'ka.nan/ 'paca (type of rodent)', /wan.'kət.tʃək/ 'boquichico (type of fish)', /'sən.nan/ 'lake', /'əɬ.ɬək/ 'afananga (type of snake)'. However, unlike /k tʃ n ɬ/, /r/ does not geminate and occurs in the onset, like other word-internal occurrences of /r/, as shown by /'tə.rək/ 'palometa (type of fish)'. There are a few words with a /rɲ/ coda, like /'murn.ka/ 'bubbles' and /'sərn.pa/ 'pineapple', which may go back to earlier /rən/.

The consonants /k ʔ <sup>?</sup>r r n/ are allowed in a word-final coda. Not all combinations of the four vowels and these coda consonants are equally frequent or even possible, as shown in Table 1. The syllable rhymes /ir/ and /ar/ occur only in loan words, as in /'pi.ðar/ 'Pilar', /'ðə.nir/ 'Daniel', /'ma.nir/ 'Manuel', /'pi.ðir/ 'Fidel'. The rime /-u<sup>?</sup>r/ occurs in native words, but is a variant pronunciation of /-wə<sup>?</sup>r/ (see section 'Other processes' below).

Morphological processes frequently create illegitimate combinations of segments which are repaired by deletions, as in /'ta.nan+k/ 'forest+LOC' giving /ta.'nak/ 'to/in the forest'.

## Detailed pronunciation of consonants

### Plosives

Syllable-initial /p t tʃ k/ are voiced after a coda nasal within the word, as in /'tʃun.pi/ ['tʃum.bi] 'caracolino (type of snail)', /'lan.tək/ ['lan.dəʔkʷ] 'foot', /pa.'pin.ku/ [pa.'piŋ.gu] 'old man'. The assimilation can be suppressed, as in the Spanish loan /u.'ɬim.pi.ku/ [u.'ɬim.pi.ku] 'Olympic'. In other syllable-initial positions they are voiceless unaspirated. Before /ə/, there would appear to be a tenseness feature accompanying voiceless occurrences of /p tʃ k/, whose nature awaits further research.

Syllable-final /k/ is typically preglottalized. Utterance-final /k/ may have an oral release, as illustrated by /'əɬ.ɬək/ ['əɬ.ɬəʔkʷ] 'afananga', be unreleased, as illustrated by /'ju.tək/ ['ju.təʔkʷ] 'someone who gets angry easily', or have an ejective pronunciation, as illustrated by /'i.ʃək/ ['i.ʃəʔkʷ] 'bat'. Morpheme-final /k/ is retained in the coda before a vowel-initial suffix, pronounced as a coda [k] followed by [ʔ], as in /u.kək+apa+ɬi/ 'emit stench from blood+ CONTINUOUS+3SG' [u.'kək.ʔa.pa.ɬi] 'the blood on him stinks', /ən.tʃək+ima/ 'hair + HEARSAY' [ən.'tʃək.ʔi.ma] 'it is said that hair'.

/ʔ/ freely occurs throughout the word, as in /maʔ.'puʔ.siʔ.paʔ/ 'how perhaps'. Minimal pairs in which it contrasts with zero are /'ðuʔ.kər/ 'sit down!' /'ðu.kər/ 'moon', /'kən.maʔ/ 'indigenous person' vs. /'kən.ma/ '2SG'.

### Rhotics

/r/ and /<sup>?</sup>r/ are contrastive inside the word and word-finally. However, word-finally, the glottalization is variably lost. For instance, the imperative marker /(k)ə<sup>?</sup>r/, as occurring in /'paʔ.kə<sup>?</sup>r/ 'Go!', /tu.'pi.tə<sup>?</sup>r/ 'Follow him!', /'u.kə<sup>?</sup>r/ 'Drink!', frequently appears as /(k)ər/. In word-final position, the contrast can usually only be ascertained after suffixation. A word-internal contrast is illustrated by /'mər.pi/ 'belly' versus /'mə<sup>?</sup>r.pi/ 'ripe', while /wə.'ran/ 'having stung.3SG' versus /wə<sup>?</sup>r.'an/ 'having got lost.3SG', both containing the 3SG participle suffix /an/, and /'kər.ɬi/ 'he brought' versus /'kə<sup>?</sup>r.ɬi/ 'it is black', both containing

the 3SG suffix / $\text{ki}(\text{n})$ /, illustrate a morpheme-final contrast before a vowel and a consonant, respectively.

Glottalized / $\text{r}^{\text{h}}$ / is a tap accompanied by a glottal closure. Preceding a word-internal consonant or, when it is present, word-finally, the glottal closure is initiated during the tap, creating creaky voice and often reaching full closure terminating the consonant. Intervocalic / $\text{r}^{\text{h}}$ / is post-glottalized as [r.ʔ], as in /wəʔr.ʔan/ [wər.ʔan] ‘having got lost.3SG’, /kwəʔr.ʔa.pa.lək/ [kwər.ʔa.pa.lək] ‘I am (currently) heavy’, /kwəʔr/ ‘heavy’ + /iʔn/ ‘not’ + / $\text{ki}$ / ‘3SG’ [kwər.ʔiʔ.niʔ] ‘it’s not heavy’. (On /ni/ as the pronunciation of / $\text{ki}$ / see section ‘Other processes’.) This is parallel to word-final /k/, as in [u.ʔək.ʔa.pa.ʔi] ‘the blood on him stinks’, mentioned under Plosives above. Before consonants, particularly / $\text{ki}$ /, / $\text{r}^{\text{h}}$ / may be realized as [d] or [t], as in [nu.ʔkədʔi] /nu.ʔkəʔr.ʔi/ ‘I’m cold’. This also applies to / $\text{kəʔr.ʔi}$ / ‘it is black’, mentioned above. The unglottalized /r/ is an alveolar tap in the onset and an alveolar trill in the coda.

### Alveolars

Of the alveolar consonants, /t n l/ are denti-alveolar, the tongue tip touching the upper teeth. Coda /n/ has a variably wide area of contact over the roof of the mouth, maximally [ŋ̞]. In particular after /u/ and /a/, the forward contact is often not made, which gives it an impression of a velar nasal. Before oral plosives and the affricate, the place of articulation is fully assimilated, as in /ʃi.ʔwi.lu/ + /lun/ ‘FEM’ + /puʔ/ ‘SIMILATIVE’ + /la/ ‘2SG’ [ʃi.ʔwi.lu.lum.buʔ.la] ‘You are like a Shiwilu woman’, /ju.ʔluʔ.ʔan.ku/ [ju.ʔluʔ.ʔan.gu] ‘type of flower’, /lun.tʃək/ [ʔlun.dʒək] ‘I am going to talk’, and /in/ ‘REFLEXIVE’ + /tən.puʔ/ ‘tie’ + / $\text{ki}$ / ‘3SG’ [in.dəm.buʔ.ʔi] ‘he tied himself up’. However, before nasal consonants, no assimilation occurs, as in /kən.ma/ [ʔkəŋ̞.ma] ‘2SG’. Even before /n, ɲ/, the wide contact for coda /n/ is retained, as in /ʔuʔ.an.naʔ/ [ʔuʔ.aŋ̞.naʔ]. ‘having sat.3PL’, /sən.nan/ [ʔsəŋ̞.nan] ‘lake’ and /ən.nu.ʔpaʔ.la/ [əŋ̞.nu.ʔpaʔ.la] ‘From where?’.

### Palatals

The consonants listed as palatal have the tongue tip, tongue blade and the forward part of the tongue body raised, the tongue tip being behind the upper front teeth. The contact stretches from dental to palatal for [tʃ ɲ ʃ]. Friction for [tʃ ʃ] is post-alveolar.

### Approximants

In addition to the prevalence of glottal stops, the general character of the language is determined by the frequent occurrence of approximants, among which the denti-alveolar approximant / $\text{ð}$ / stands out. The tongue front is somewhat convex with raised tip and sides, as for /t/ or /n/, with the sides approximating the lateral gums and the tip approximating the area of the alveolar ridge and front teeth, without making contact. It is never interdental, unlike the dental approximants of Kawayan and other languages spoken in the Philippines as well of five Western Australian languages (Olson et al. 2010). Figure 1 shows trajectories

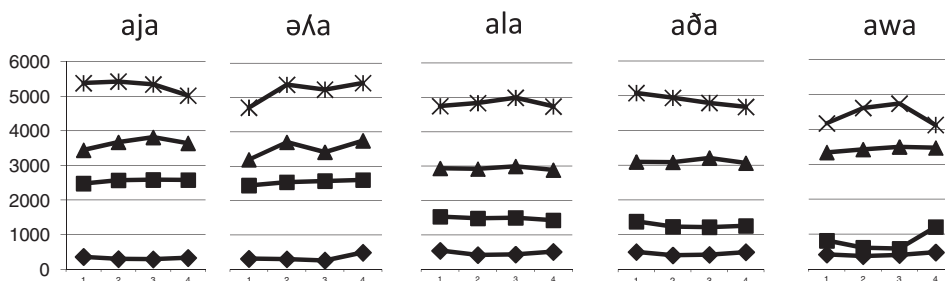


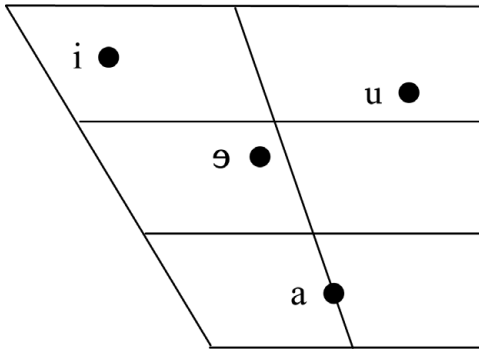
Figure 1 F1, F2, F3 and F4 during five approximants, plotted on a normalized time scale.

of the first four formants (Boersma & Weenink 1992–2010), averaged over three repetitions of the five approximants by speaker M as occurring in /<sup>h</sup>ʃa.jaʔ/ ‘sister’, /ə.<sup>h</sup>ka(̞.əa.ɬi)/ ‘he/she has dazzled/non-openable eyes’, /<sup>h</sup>ka.la/ ‘three’, /<sup>h</sup>la.əa/ ‘face’ and /<sup>h</sup>a.wa/ ‘mother’. Of the other four approximants, /ə/ resembles /l/ most, in particular in having a high F1. However, its F2 is lower than that of /l/, while being higher than that of /w/. The token of Kagayanen interdental /ə/ given by Olsen et al. (2010) has an F2 of 1950 Hz, as opposed to 1240 Hz in our Shiwilu data. The mean duration of /ɬ/ and /ə/ is 170 ms, that of /l w j/ 112 ms. /ɬ/, but not /ə/, is occasionally produced with light lateral friction. Perceptually, /ə/ may sometimes give the impression of a lateral sound, but it never varies with either /l/ or /ɬ/.

Although /i/ is rare after /l/, it contrasts with /ɬ/ in this context, as shown by /u.<sup>h</sup>ta.lin.puʔ/ ‘frequently, constantly’. The default consonant in loans is /ɬ/, as in /u.<sup>h</sup>kin.pi.ku/ ‘Olympic’.

## Vowels

There are four vowels, /i ə a u/. There is no quantity contrast for them, and they can appear in all positions in the word.



i	<sup>h</sup> si.lu	‘cane’
ə	<sup>h</sup> i.ʃək	‘bat’
a	<sup>h</sup> i.ʃa	‘paujil (type of curassow)’
u	<sup>h</sup> su.luʔ	‘Humboldt woolly monkey’

/i/ is a close-mid to close unrounded front vowel, while /u/ varies from [ü] to [o], most typically a weakly rounded close-mid back vowel. /a/ varies from centralized front open [ä] in open syllables via centralized front [æ] to central [ɜ] in closed syllables. The quality of /ə/ varies between mid centralized front [ɛ̞] to close-mid central [ə]. This vowel is unusually short, particularly between voiceless consonants, in both stressed and unstressed syllables. It is often only 20–40 ms long, as in /tək.<sup>h</sup>su.su/ ‘raise a child’, /tʃi.<sup>h</sup>pi.tək/ ‘skin, bark’, /tʃək/ ‘straight’, /in.<sup>h</sup>sək.lu.tən.ɲək/ ‘I suffer’. In running speech, this reduction may be more extreme, as in /nan.<sup>h</sup>ta.pi.tək/ ‘strong’ in ‘The North Wind and the Sun’, where /ə/ is deleted. /ən/ may on occasion be pronounced as syllabic [n], as illustrated by /tək.<sup>h</sup>kin.tʃi.nən/ ‘indeed’ in the same story.

## Stress

Stress occurs once per word. Regular stress occurs on the second syllable of the word, as in /mi.<sup>h</sup>ka.ra.waʔ/ ‘turkey’. However, word-final stress is avoided, causing disyllabic words to

have initial stress, as in /'si.sək/ 'porcupine', except when there is no other syllable available, as in /'nək/ 'the place I used to live'. A marginal pattern is final syllable stress in polysyllables, occurring in /wi.'a/ (approximately [w'ja]) 'squirrel' and /si.'mir/ 'Varadero (place name)', while /'in.ka.tu?/ 'four' has exceptional stress on the first syllable.

Incorporated verbs, nominal compounds and many suffixed forms are treated as single words, as in /i.kər/ 'hurt' + /'mutu?/ 'head' + /lək/ '1SG' giving /i.'kər.mu.tu?lək/ 'I have a headache' and /pi.ðək/ 'house' + /'mutu?/ 'wooden beam' giving /pi.'ðək.mu.tu?/ 'top beam of slanted roof'. Again, suffixing /u.ru/ 'deer' with the diminutive /ʃa/ gives regular /u.'ru.ʃa/ 'small deer'; adding delimitative /-sa?/ retains the accent on the second syllable, /u.'ru.ʃa.sa?/ 'only a small deer'. However, some suffixes impose other stress patterns, outlined in the remainder of this section.

The desiderative prefix /ja/ attracts the stress, as in /'ja.sa.ka?.tu.lək/ 'I want to work', from /sa.'ka?.tu.lək/ 'I worked', /'ja.lu.nək/ 'I want to speak', from /'lu.nək/ 'I spoke'.

The locative suffix /k/ (or /kək/ after stressed syllables) attracts stress when suffixed to disyllabic or monosyllabic words, as in /'ʔi.ma?+k/ /ʔi.'mak/ 'to/in Lima', /pən+kək/ /pən.'kək/ 'into/in the fire'. Exceptional stress survives this suffixation, as in /si.'mir.kək/ 'to/in Varadero'. On trisyllabic or longer words, the stress is preserved, as in /ʃi.'wi.lu+k/ giving /ʃi.'wi.luk/ 'to/in Jeberos'.

The 3SG participial suffix /an/ attracts stress when suffixed to a monosyllabic verb, as in /ðu?+an/ /ðu?.'an/ 'he/she having sat', but /sa.'ka?.tu + an/ gives regular /sa.'ka?.tan/ 'he/she having worked'.

The emphatic affirmative /un.'ta.na/ is inherently stressed, as in /nana/ '3SG' +/ku/ 'predicative 1SG' +/un.ta.na/ giving /na.na.kun.'ta.na/ 'That's me'.

The particle /tʃi/, used after a word by male speakers to express regret, imposes stress on the preceding syllable, as in /u.ru.'ʃa tʃi/, e.g. 'What a shame about my small deer (male speaker)'.

## Other processes

In addition to stop voicing after nasals, nasal place assimilation before oral stops and deletions due to syllable repair, a number of other processes occur.

Word-internally, alveolar /t, n, l/ change to /tʃ ɲ ʎ/ after coda /r, ʔr/, as shown for the lateral by /'ka.sə?r/ 'sweet' + /lu?/ 'powder', giving /ka.'sə?r.ʎu?/ 'sugar', /si.'mir/+/lun/ giving /si.'mir.ʎun/ 'Varadero woman'. Before the consonants with a full alveolar closure, /t n/, coda /r ʔr/ are deleted after effecting the palatalization, with compensatory backward spreading of the stop, as in /kə?r/ 'manioc' + /tək/ 'skin', giving /'kət.tʃək/ 'manioc skin', /ku?.'apər/ 'woman' + /nən/ '3SG.POSS' giving /ku?.'a.pən.pən/ 'his woman', /kə?r/ 'manioc' + /nala/ 'stick' giving /kən.'ja.la/ 'manioc stick'. In addition, /n/+/ʎ/ coalesce to /ɲ/, as in /tʃimin+ ʎi(n)/ 'die+3SG' is /tʃi.'mi.ɲi(n)/ 'he died', and /r/+/ʎ/ coalesce to /ʎ/, as in /wər+ ʎi/ to give /'wəʎ.ʎi/ 'stung.3SG', with gemination after /ə/. Glottalized /ʔr/ does not have this effect, as shown by /'wə?r.ʎi/ 'got lost.3SG'.

/wə/ varies with /u/, as in /pu?r.'a.pa.ʎi/, /pwə?r.'a.pa.ʎi/ 'he is fishing', /u.ran/, /wə.'ran/ ('pa?r.ʎi) 'having eaten.3SG (s/he left)'.

/i, u/ will variably turn into glides after vowels, as in /la.'wək.a.pa.lək/, /la.'u.ka.pa.lək/ ['lawk.a.pa.lək] 'I hear'. /a+i/ is variably reduced to [əj], [ij], [i], as in /kwa/ '1SG' + /i?na/ 'EMPHATIC' /'kwai?na/ ['kwəj?na] 'I for one'.

Complex reductions within words lead to glides from /i,u/ involving a rightward displacement of /ʔ/, as shown by /su.'lu?/ 'Humboldt woolly monkey'+/in.pu?/ 'NEG' [su.'lwi?m.bu?] 'not a Humboldt woolly monkey', and, with loss of /n/ after it metathesized with coda /ʔr/ and voiced /k/ to [g], in /'tʃi.min/ 'die' + /ə?r.ka.su?/ 'NOM.3PL' giving /tʃi.'mjə?r.ga.su?/ 'those who died'; /ja/ 'DESIDERATIVE' + /tʃi.min/ + /a?r.ka.su?/ 'NOM.3SG' giving /'ja.tʃi.mja?r.ga.su?/ 'The fact that he wants to/will die'; /lun/ 'speak' + /ə?r.ka.wa.su?/

giving /lu<sup>2</sup>r.ga.wa.su<sup>2</sup>/ ‘What have they spoken?’ In these cases, the voicing of the oral stop is due to the underlying nasal consonant.

The diminutive suffix /ja/ combines with palatalization of alveolar consonants in some stems. The process is both optional and lexically selective.<sup>2</sup> The palatalization of alveolars indicates a further degree of diminution, as in /la<sup>2</sup>pi/ ‘stone’, /la<sup>2</sup>.pi.ja/ ‘little stone’ and /ʎa<sup>2</sup>.pi.ja/ ‘very little stone’; /ja.ja.ja.sa<sup>2</sup>/ 3SG.DIM.DELIMITATIVE ‘only very little him/her’ by the side of /na.ja.ja.sa<sup>2</sup>/ ‘only little him/her’.<sup>3</sup>

## Intonation

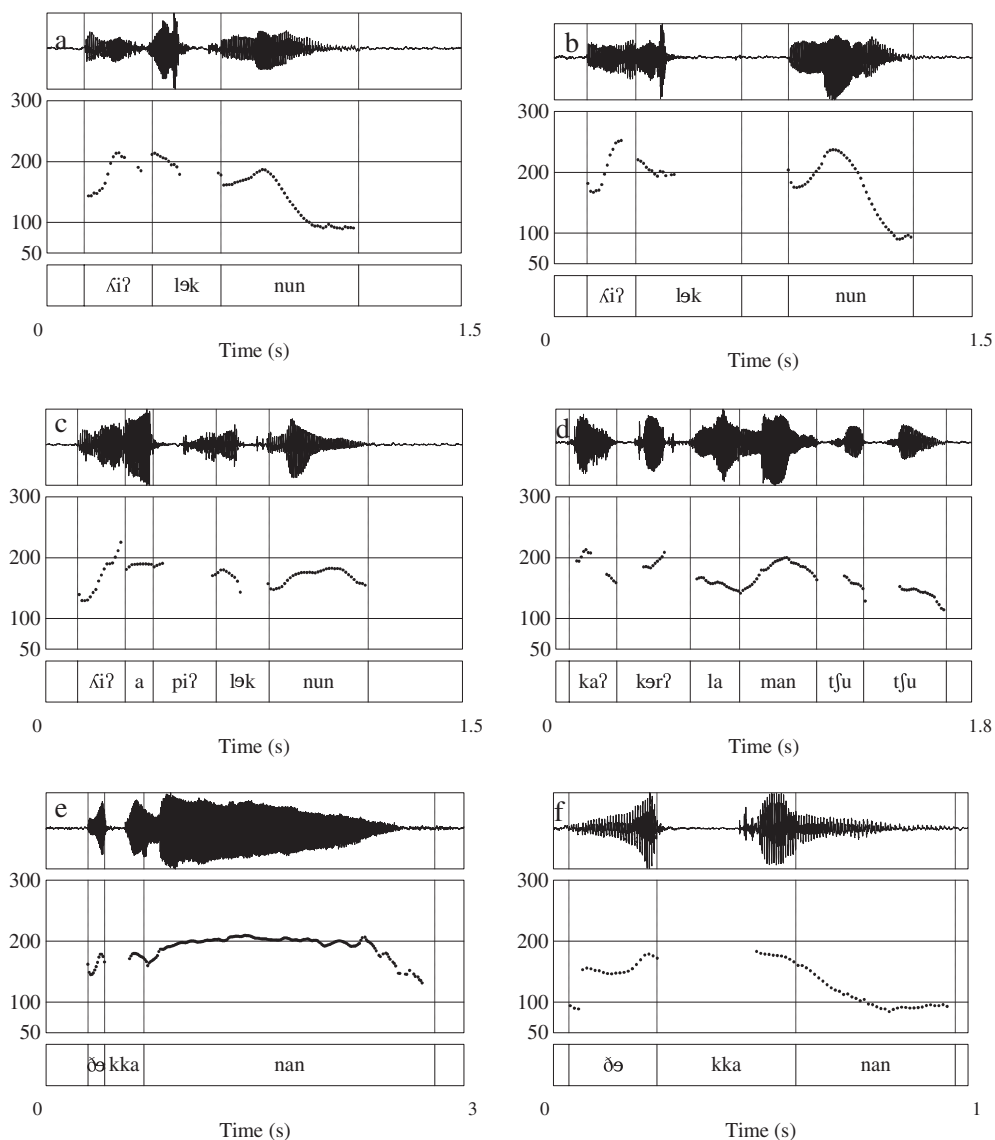
The declarative, interrogative and continuative intonation contours are phonetically distinct, but because their general shapes are similar, they may be variants of the same phonological tone structure. The first three panels of Figure 2 (next page) show lexically comparable intonational phrases with two stressed syllables in a final declarative phrase (panel (a)), a final interrogative phrase (panel (b)), and prefinal phrase (panel (c)). Stressed syllables have falling pitch accents, one in every word. The accentual peaks are higher in interrogative sentences than in declarative sentences, as illustrated in panels (a) and (b). The pitch fall stops at mid pitch in prefinal phrases (panel (c)). A similar mid end pitch is used in commands, as illustrated in panel (d). This command intonation can also be heard in /pa<sup>2</sup>.kə<sup>2</sup>r/ ‘Go!’, /tu.pi.tə<sup>2</sup>r/ ‘Follow him!’, /u.kə<sup>2</sup>r/ ‘Drink!’ in section ‘Rhotics’ above. In addition to these contours with falling pitch accents, there is a very different vocative intonation, which has a greatly lengthened final syllable with sustained high pitch followed by a brief fall. This contour supplants the usual pitch accent, as in /ða.jir/ ‘Daniel!’ (compare /ða.jir/), /ðək.ka.nan/ ‘Paca (type of rodent)!’. It is shown in panel (e) for the word /ðək.ka.nan/, whose plain declarative intonation is given in panel (f).

Finally, some particles come with tone, as shown in Figure 3. First, there are two question particles, /a<sup>2</sup>.tʃa/ ‘INTERROG’, as in /ðən.kən a<sup>2</sup>.tʃa/ ‘Who are you?’ and /a<sup>2</sup>.ta<sup>2</sup>/ ‘SURPRISED INTERROG’, as in /ma<sup>2</sup>.nən a<sup>2</sup>.ta<sup>2</sup>/ ‘What on earth is this?’ They are independent words, as shown by the wide-contact pronunciation of coda /n/ in /ma<sup>2</sup>.nən a<sup>2</sup>.ta<sup>2</sup>/ . They cause the stress to be on the first syllable of the preceding word, while having a high toned final syllable, as shown in panel (a) of Figure 3. Panel (b) shows the low toned particle /tən/, used by female speakers to express regret, as in /u.ru.ja tən/ ‘What a shame about my small deer (female speaker)’. Like its male counterpart /tʃi/, it imposes stress on the preceding syllable, as shown in /ka.lu.wi<sup>2</sup>.pa.ʎi tʃi/ and /ka.lu.wi<sup>2</sup>.pa.ʎin tən/ ‘I’m sorry he is sick’, whereby in these longer words the original stress appears to be preserved as well. This female form shows that /tən/ is an independent word in not allowing the word-final nasal to voice the initial /t/.

Pitch accents are deleted as a result of morphological derivations (see section ‘Stress’ above), but are neither deleted nor pronounced with reduced pitch range as a function of information structure. For instance, /nun ʎi<sup>2</sup>.a.pi<sup>2</sup>.nək, pun.pu.nan ʎi<sup>2</sup>.a.pa.lək/ ‘I don’t see a canoe, I see a raft’ has pitch accents on all four words, despite the ‘given’ status of /ʎi<sup>2</sup>.a.pa.lək/ ‘see.CONTINUOUS.1SG’. As for the expression of information structure by other means, it is noted that the delimitative suffix /sa<sup>2</sup>/ ‘only’ is sometimes used to convey narrow focus.

<sup>2</sup> There are many places in this article, in particular in the sections on stress and intonation, in which we might have referred to Bendor-Samuel (1981 [1958]), whose description is in terms of Firthian prosodies. Besides numerous confirming findings, there are many occasions for motivating differences in analysis and a few apparent differences in the data. In this particular case, it is to be noted that Bendor-Samuel reports a general process of palatalization in diminutives, suggesting that the palatalizations have recently become lexicalized. A full account is beyond the scope of this article.

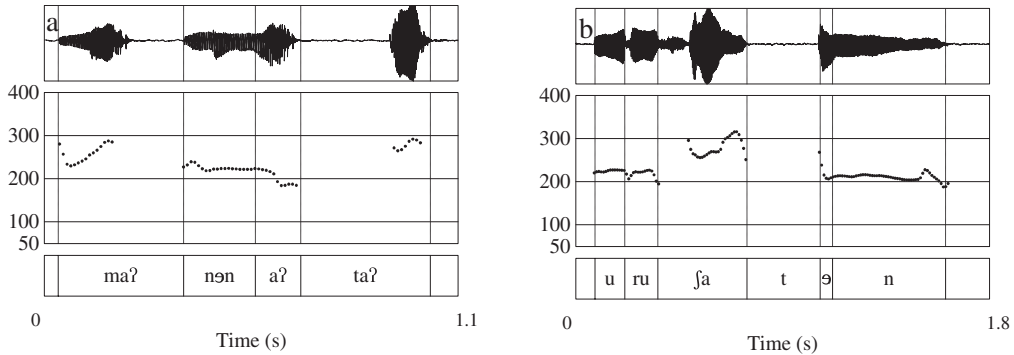
<sup>3</sup> The palatalization of /l n/ in diminutives also occurs in central Peruvian Quechua and may be an areal feature (Adelaar 1977: 290–292).



**Figure 2** Intonation contours for declarative (panel a) and interrogative (panel b) *'xi? lək 'nun*/ 'I see a canoe/Do I see a canoe?' and for non-final *'xi? a pi? lək 'nun*/ 'I don't see a canoe' (panel c), as well as a command intonation for *'ka? kəs?r la 'mantʃu.tʃu*/ 'Eat the meat of a white-lipped peccary!' (panel d), a vocative intonation on */ðək ka.'nan/* 'paca (type of rodent)!' (panel e) and a declarative intonation for the same word */ðək.'ka nan/* (panel f). Speaker M.

## Recorded passage

As indicated in footnote 1, the story of the North Wind and the Sun was recorded in seven sections, each of which was briefly related to speaker M in Spanish by the first author and then retold by him in his own words. The last section was recorded some six months later. The transcription is phonemic. Parentheses indicate intonational phrases.



**Figure 3** Intonation contours for interrogative /'maʔ.nən aʔ.taʔ/ 'What is it?' and /u.ru.ʃa tən/ 'What a shame about my small deer' (panel b). Speaker E.

### Transcription

The transcription is broad, and exclusively uses segmental symbols that were assigned to the vowel and consonant phonemes.

(tan.'lu.wa) (kək.'ki.lək) (in.'ju.ta.pa.ʔi.naʔ) (ðə.'ni.paʔ aʔ.'pin.taʔ  
 nan.'ta.pi.tək) ('tan.naʔ) || (tan.'lu.wa) ('kək.ki i.'tu.ʔi) ('kwa.ka aʔ.'pin.taʔ  
 kən.'mak.lan nan.'ta.pi.tək.ku) || (tu.'sik) (kək.'ki.lər naʔ.'pi.ʔi)  
 (tu.'muʔ.pa.la) ('kwa.ka aʔ.'pin.taʔ nan.'ta.pi.tək.ku kən.'mak.lan) (i.'tu.ʔi)  
 || (na.'nək.li.ma) (a.'laʔ.saʔ) ('ja.ʔiʔ ʔiʔ.'tu.ʔi) || (an.'pu.luʔ.tək  
 i.'ði.mu.na.nən.lək in.'puʔ.pi.tu.suʔ) (pək.'pi.kəʔ.ʔi) || ('na.nək ka.'tuʔ  
 'ða.pər wa.'nə.ran.naʔ) (tan.'lu.wa kək.'ki.lək tu.'ʔi.naʔ) ('na.na)  
 (uk.'a.pi.lə.raʔ.suʔ) (na.'nuk.'a.pi.lə.raʔ.suʔ) [NB: The final intonational  
 phrase is a faster version of the preceding two] || (ðən.'lə.'ri.paʔ)  
 (i.'ði.mu.na.nən aʔ.'ðək.ʔi) (na.'naʔ.ka aʔ.'pin.taʔ nan.'ta.pi.tək) (ən.'taʔn  
 i.'paʔ.la a.sək 'ʔiʔ.kər) || (na.'nən.tu tan.'lu.wa) ('pək.kuʔ) ('pək.kuʔ)  
 ('pək.kuʔ aʔ.'tu.ʔi) || (pək.'kuʔ.tu.ku.si.ki.ma 'na.na 'ja.ʔiʔ) (aʔ.'pin.taʔ)  
 (in.'suʔ.wər.pi.ʔi) (na.na an.'pu.luʔ.tək i.'ði.mu.na.nən.lək) (in.'ni.tʃiʔ.ji)  
 (aʔ.'ðək.aʔ.suʔ) || (na.'nək.lan 'kək.ki) ('kək.ki pək.'pi.ʔi) (na.'nək  
 pin.'tu.ʔi) || ('ʔiʔ.lər 'ʔiʔ.ər.tu.sik) (ima) (na.'ku.suʔ i.'kə.run.taʔ.ʔi 'kək.ki)  
 ('na.nək i.ma) (in.'suʔ.wər.piʔ.suʔ) ('i.pər i.'ði.mu.na.nən) ('u.suʔ) ('ðək.ʔi  
 pi.'jik.lan) || (tan.'lu.wa.lər 'na.nək i.'tu.ʔi 'kək.ki) (tək.'kin.tʃi.nən)  
 (kən.ma aʔ.'pin.taʔ nan.'ta.pi.la 'kwak.la) || (tək.'kin.tʃi kən.'ma.lər  
 aʔ.'ðək.la i.'ði.mu.na.nən) || (kwa.'lə.riʔ.na) (in.'ni.tʃin.puʔ.wi.nək)  
 (i'paʔ.la.ka 'ʔiʔ.ʔən) (i.'paʔ.la.ka la.'tək.ʔən) (nan.'ta.piʔ.maʔ.suʔ) ||

### Translation

The wind and the sun were disputing who was the stronger. The wind told the sun: 'I am stronger than you'. Then the sun answered him 'You are lying. I am stronger than you', he said. Then a man appeared wrapped in his cloak. He

appeared. Then the two of them, the wind and the sun, stood up and said: ‘The one who is coming, whoever gets him to take off his cloak, he will be the strongest. Now let’s see’. First the wind blew, blew and blew. But the more he blew, the more the man wrapped his cloak around him. He couldn’t make him throw it off. As the sun shone and shone, the man felt very uncomfortable. And so he took off what he had wrapped around him, taking his entire cloak off his body. At that moment the wind told the sun: ‘Indeed you are stronger than me. You managed to have him take off his cloak. I was not able to do it. Now (that) I’ve seen you, now I believe you, that you are the stronger one.’

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