Shiwilu (Jebero)

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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.[1]

[1] 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.

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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 ˀr			
Lateral approximant		l	ʎ		
Approximant	w	ð̞	j		

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

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.ˈɲiʔ.wa	‘dog’
r	ˈu.ru	‘deer’
ˀr	ˈməˀr.pi	‘ripe’
l	a.ˈliʔ.la	‘another’
ʎ	i.ˈʎa.pa	‘shotgun’ (Quechua loan)
w	wa.ˈwa.sər	‘baby’
ð̞	i.ˈð̞i.mu.nan	‘blanket’
j	i.ˈja.ð̞ək	‘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 /ˀr/ can occur in the onset; /r/ can only be an onset word-internally. CC-onsets are virtually restricted to /kw/, as in /kwa/ ‘1SG’, /ˈkwa.ɲi/ ‘type of meal’ (Spanish loan, *juane*). /pw/ is a marginal onset occurring in/ˈpwi.ɲu/ ‘water jar’ (Quechua loan). Syllable contractions may produce other combinations with /w/. Except for /ʔ/ and /ˀr/, intervocalic single consonants are onsets, as in /ˈa.wa/ ‘mother’, /ˈlu.paʔ/ ‘land’. Word-internally, /ʔ/ and /ˀr/ remain codas, as in /paʔ.ˈa.waʔ/ ‘so that we (INCL.) go’, /wəˀr.ˈan/ ‘having got lost.3SG’ (for the realization of these consonants, see section ‘Detailed pronunciation of consonants’ below).

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Table 1 Legitimate word-final VC structures.

	k	n	r	ʔr	ʔ
ə	+	+	+	+	–
i	+	+	+	–	+
u	+	+	*rare*	*rare*	+
a	+	+	*rare*	–	+

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 /ˈkək.ki/ 'sun', /ɸək.ˈka.nan/ 'paca (type of rodent)', /wan.ˈkət.tʃək/ 'boquichico (type of fish)', /ˈsən.nan/ 'lake', /ˈəʎ.ʎək/ 'afaninga (type of snake)'. However, unlike /k tʃ n ʎ/, /r/ does not geminate and occurs in the onset, like other word-internal occurrences of /r/, as shown by /ˈtə.rək/ 'palometa (type of fish)'. There are a few words with a /rn/ coda, like /ˈmurn.ka/ 'bubbles' and /ˈsərn.pa/ 'pineapple', which may go back to earlier /rən/.

The consonants /k ʔ ʔr 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 /ˈpi.ɸar/ 'Pilar', /ˈɸa.ɲir/ 'Daniel', /ˈma.ɲir/ 'Manuel', /ˈpi.ɸir/ 'Fidel'. The rime /-uʔr/ occurs in native words, but is a variant pronunciation of /-wəʔr/ (see section 'Other processes' below).

Morphological processes frequently create illegitimate combinations of segments which are repaired by deletions, as in /ˈta.nan+k/ 'forest+LOC' giving /ta.ˈnak/ '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 /ˈtʃun.pi/ [ˈtʃum.bi] 'caracolito (type of snail)', /ˈlan.tək/ [ˈlan.dəʔkˀ] 'foot', /pa.ˈpin.ku/ [pa.ˈpiŋ.gu] 'old man'. The assimilation can be suppressed, as in the Spanish loan /u.ˈʎin.pi.ku/ [u.ˈʎim.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 /ˈəʎ.ʎək/ [ˈəʎ.ʎəʔkʳ] 'afaninga', be unreleased, as illustrated by /ˈju.tək/ [ˈju.təʔkˀ] 'someone who gets angry easily', or have an ejective pronunciation, as illustrated by /ˈi.ʃək/ [ˈi.ʃəʔkʼ] '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+ʎi/ 'emit stench from blood+ CONTINUOUS+3SG' [u.ˈkək.ʔa.pa.ʎi] 'the blood on him stinks', /ən.tʃək+ima/ 'hair + HEARSAY' [ən.ˈtʃək.ʔi.ma] 'it is said that hair'.

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

Rhotics

/r/ and /ʔr/ are contrastive inside the word and word-finally. However, word-finally, the glottalization is variably lost. For instance, the imperative marker /(k)əʔr/, as occurring in /ˈpaʔ.kəʔr/ 'Go!', /tu.ˈpi.təʔr / 'Follow him!', /ˈu.kəʔr / '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 /ˈmər.pi/ 'belly' versus /ˈməʔr.pi/ 'ripe', while /wə.ˈran/ 'having stung.3SG' versus /wəʔr.ˈan/ 'having got lost.3SG', both containing the 3SG participle suffix /an/, and /ˈkər.ʎi/ 'he brought' versus /ˈkəʔr.ʎi/ 'it is black', both containing

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the 3SG suffix /ʎi(n)/, illustrate a morpheme-final contrast before a vowel and a consonant, respectively.

Glottalized /ˀr/ 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 /ˀr/ is post-glottalized as [r.ʔ], as in /wəˀr.ˈan/ [wər.ˈʔan] 'having got lost.3SG', /kwəˀr.ˈa.pa.lək/ [kwər.ˈʔa.pa.lək] 'I am (currently) heavy', /kwəˀr/ 'heavy' + /iʔn/ 'not' + /ʎi/ '3SG' [kwər.ˈʔiʔ.ɲiʔ] 'it's not heavy'. (On /ɲi/ as the pronunciation of /ʎi/ see section 'Other processes'.) This is parallel to word-final /k/, as in [u.ˈkək.ʔa.pa.ʎi] 'the blood on him stinks', mentioned under Plosives above. Before consonants, particularly /ʎ/, /ˀr/ may be realized as [d] or [t], as in [nuˈkədʎi] /nu.ˈkəˀr.ʎi/ 'I'm cold'. This also applies to /ˈkəʔr.ʎi/ '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 [n̪n̪]. 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.ˈwi.lu/ + /lun/ 'FEM' + /puʔ/ 'SIMILATIVE' + /la/ '2SG' [ʃi.ˈwi.lu.lum.buʔ.la] 'You are like a Shiwilu woman', /ju.ˈluʔ.ð̪an.ku/ [ju.ˈluʔ.ð̪aŋ.gu] 'type of flower', /lun.tʃək/ [ˈlun.dʒək] 'I am going to talk', and /in/ 'REFLEXIVE'+/tən.puʔ/ 'tie' + /ʎi/ '3SG' [in.ˈdəm.buʔ.ʎi] 'he tied himself up'. However, before nasal consonants, no assimilation occurs, as in ˈkən.ma [ˈkən̪n̪.ma] '2SG'. Even before /n, ɲ/, the wide contact for coda /n/ is retained, as in /ð̪uʔ.an.naʔ/ [ð̪uʔ.ˈan̪n̪.naʔ]. 'having sat.3PL', /ˈsən.nan/ [ˈsən̪n̪.naŋ] 'lake' and /ən.ɲu.ˈpaʔ.la/ [ən̪n̪.ɲu.ˈpaʔ.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 ʎ]. 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 /ð̪/ 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 Kagayanen and other languages spoken in the Philippines as well of five Western Australian languages (Olson et al. 2010). Figure 1 shows trajectories

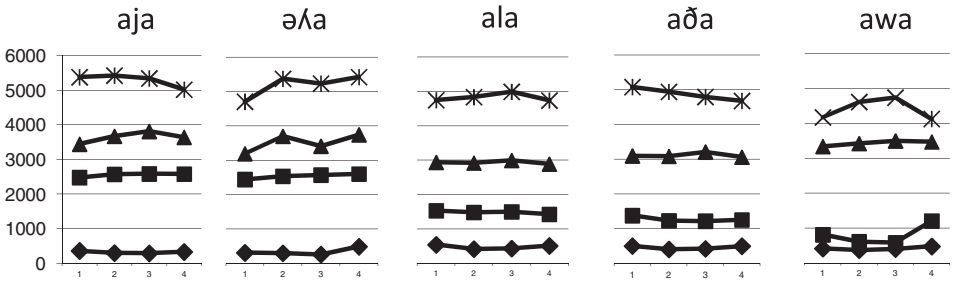

Figure 1 F1, F2, F3 and F4 during five approximants, plotted on a normalized time scale.

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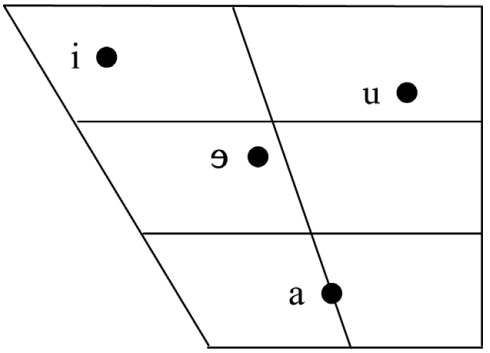
of the first four formants (Boersma & Weenink 1992–2010), averaged over three repetitions of the five approximants by speaker M as occurring in /ˈʃa.jaʔ/ ‘sister’, /ə.ˈʎa(.ð̞a.ʎi)/ ‘he/she has dazzled/non-openable eyes’, /ˈka.la/ ‘three’, /ˈla.ð̞a/ ‘face’ and /ˈa.wa/ ‘mother’. Of the other four approximants, /ð̞/ 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 /ð̞/ 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 /ʎ/ and /ð̞/ is 170 ms, that of /l w j/ 112 ms. /ʎ/, but not /ð̞/, is occasionally produced with light lateral friction. Perceptually, /ð̞/ may sometimes give the impression of a lateral sound, but it never varies with either /l/ or /ʎ/.

Although /i/ is rare after /l/, it contrasts with /ʎ/ in this context, as shown by /u.ˈta.lin.puʔ/ ‘frequently, constantly’. The default consonant in loans is /ʎ/, as in /u.ˈʎin.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	ˈsi.lu	‘cane’
ə	ˈi.ʃək	‘bat’
a	ˈi.ʃa	‘paujil (type of curassow)’
u	ˈsu.luʔ	‘Humboldt woolly monkey’

/i/ is a close-mid to close unrounded front vowel, while /u/ varies from [ü] to [o̜], 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 [ɛ̈] 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.ˈsu.su/ ‘raise a child’, /tʃi.ˈpi.tək/ ‘skin, bark’, /ˈtʃək/ ‘straight’, /in.ˈsək.lu.tən.ɲək/ ‘I suffer’. In running speech, this reduction may be more extreme, as in /nan.ˈta.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.ˈkin.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.ˈka.ra.waʔ/ ‘turkey’. However, word-final stress is avoided, causing disyllabic words to

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have initial stress, as in /ˈsi.sək/ 'porcupine', except when there is no other syllable available, as in /ˈɲək/ 'the place I used to live'. A marginal pattern is final syllable stress in polysyllables, occurring in /wi.ˈa/ (approximately [wˈja]) 'squirrel' and /si.ˈmir/ 'Varadero (place name)', while /ˈin.ka.tuʔ/ 'four' has exceptional stress on the first syllable.

Incorporated verbs, nominal compounds and many suffixed forms are treated as single words, as in /ˈi.kər/ 'hurt' + /ˈmutuʔ/ 'head' + /ˈlək/ '1SG' giving /i.ˈkər.mu.tuʔ.lək/ 'I have a headache' and /ˈpi.ʤək/ 'house' + /ˈmutuʔ/ 'wooden beam' giving /pi.ˈʤək.mu.tuʔ/ 'top beam of slanted roof'. Again, suffixing /ˈu.ru/ 'deer' with the diminutive /ʃa/ gives regular /u.ˈru.ʃa/ 'small deer'; adding delimitative /-saʔ/ retains the accent on the second syllable, /u.ˈru.ʃa.saʔ/ '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 /ˈja.sa.kaʔ.tu.lək/ 'I want to work', from /sa.ˈkaʔ.tu.lək/ 'I worked', /ˈja.lu.nək/ 'I want to speak', from /ˈlu.nək/ 'I spoke'.

The locative suffix /k/ (or /kək/ after stressed syllables) attracts stress when suffixed to disyllabic or monosyllabic words, as in /ˈʎi.maʔ+k/ /ʎi.ˈmak/ 'to/in Lima', /pən+kək/ /pən.ˈkək/ 'into/in the fire'. Exceptional stress survives this suffixation, as in /si.ˈmir.kək/ 'to/in Varadero'. On trisyllabic or longer words, the stress is preserved, as in /ʃi.ˈwi.lu+k/ giving /ʃi.ˈwi.luk/ 'to/in Jeberos'.

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

The emphatic affirmative /un.ˈta.na/ is inherently stressed, as in /nana/ '3SG' +/ku/ 'predicative1SG' + /un.ta.na/ giving /na.na.kun.ˈta.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.ˈʃa 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 /ˈka.səʔr/ 'sweet' + /luʔ/ 'powder', giving /ka.ˈsəʔr.ʎuʔ/ 'sugar', /si.ˈmir/+/lun/ giving /si.ˈmir.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 /kəʔr/ 'manioc' + /tək/ 'skin', giving /ˈkət.tʃək/ 'manioc skin', /kuʔ.ˈapər/ 'woman' + /nən/ '3SG.POSS' giving /kuʔ.ˈa.pən.ɲən/ 'his woman', /kəʔr/ 'manioc' + /nala/ 'stick' giving /kən.ˈɲa.la/ 'manioc stick'. In addition, /n/+/ʎ/ coalesce to /ɲ/, as in /tʃimin+ ʎi(n)/ 'die+3SG' is /tʃi.ˈmi.ɲi(n)/ 'he died', and /r/ + / ʎ / coalesce to /ʎ/, as in /wər + ʎi/ to give /ˈwəʎ.ʎi/ 'stung.3SG', with gemination after /ə/. Glottalized /ʔr/ does not have this effect, as shown by /ˈwəʔr.ʎi/ 'got lost.3SG'.

/wə/ varies with /u/, as in /puʔr.ˈa.pa.ʎi/, /pwəʔr.ˈa.pa.ʎi/ 'he is fishing', /ˈu.ran/, /wə.ˈran (ˈpaʔ.ʎi)/ 'having eaten.3SG (s/he left)'.

/i, u/ will variably turn into glides after vowels, as in /la.ˈwək.a.pa.lək/, /la.ˈu.ka.pa.lək/ [ˈlawk.a.pa.lək] 'I hear'. /a+i/ is variably reduced to [əj], [ɪj], [i], as in /kwa/ '1SG' + /iʔna/ 'EMPHATIC' /ˈkwaiʔ.na/ [ˈkwəjʔ.na] ' I for one'.

Complex reductions within words lead to glides from /i,u/ involving a rightward displacement of /ʔ/, as shown by /su.ˈluʔ/ 'Humboldt woolly monkey'+/in.puʔ/ 'NEG' [su.ˈlwiʔ.m.buʔ] 'not a Humboldt woolly monkey', and, with loss of /n/ after it metathesized with coda /ʔr/ and voiced /k/ to [g], in /ˈtʃi.min/ 'die' + /əʔr.ka.suʔ/ 'NOM.3PL' giving /tʃi.ˈmjəʔr.ga.suʔ/ 'those who died'; /ja/ 'DESIDERATIVE' + /tʃi.min/ + /aʔ.ka.suʔ/ 'NOM.3SG' giving /ˈja.tʃi.mjaʔ.ga.suʔ/ 'The fact that he wants to/will die'; /lun/ 'speak' +/əʔr.ka.wa.suʔ/

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giving /luʔr.ga.wa.suʔ/ ‘What have they spoken?’ In these cases, the voicing of the oral stop is due to the underlying nasal consonant.

The diminutive suffix /ʃa/ combines with palatalization of alveolar consonants in some stems. The process is both optional and lexically selective.[2] The palatalization of alveolars indicates a further degree of diminution, as in /ˈlaʔpi/ ‘stone’, /laʔ.ˈpi.ʃa/ ‘little stone’ and /ʎaʔ.ˈpi.ʃa/ ‘very little stone’; /ɲa.ˈɲa.ʃa.saʔ/ 3SG.DIM.DELIMITATIVE ‘only very little him/her’ by the side of /na.ˈna.ʃa.saʔ/ ‘only little him/her’.[3]

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 /ˈpaʔ.kəʔr/ ‘Go!’, /tu.ˈpi.təʔr / ‘Follow him!’, /ˈu.kəʔr / ‘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 /ð̩a.ˈɲir/ ‘Daniel!’ (compare /ˈð̩a.ɲir/), /ð̩ək.ka.ˈnan/ ‘Paca (type of rodent)!’. It is shown in panel (e) for the word /ð̩ək.ˈka.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, /aʔ.tʃa/ ‘INTERROG’, as in /ˈð̩ən.kən aʔ.tʃa/ ‘Who are you?’ and /aʔ.taʔ/ ‘SURPRISED INTERROG’, as in /ˈmaʔ.nən aʔ.taʔ/ ‘What on earth is this?’ They are independent words, as shown by the wide-contact pronunciation of coda /n/ in /ˈmaʔ.nən aʔ.taʔ/. 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.ˈʃa 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.ˈlu.wiʔ.pa.ˈʎi tʃi/ and /ka.ˈlu.wiʔ.pa.ˈʎin 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, /ˈnun ʎiʔ.ˈa.piʔ.nək, pun.ˈpu.nan ʎiʔ.ˈa.pa.lək/ ‘I don’t see a canoe, I see a raft’ has pitch accents on all four words, despite the ‘given’ status of /ʎiʔ.ˈa.pa.lək/ ‘see.CONTINUOUS.1SG’. As for the expression of information structure by other means, it is noted that the delimitative suffix /saʔ/ ‘only’ is sometimes used to convey narrow focus.

[2] 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.

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

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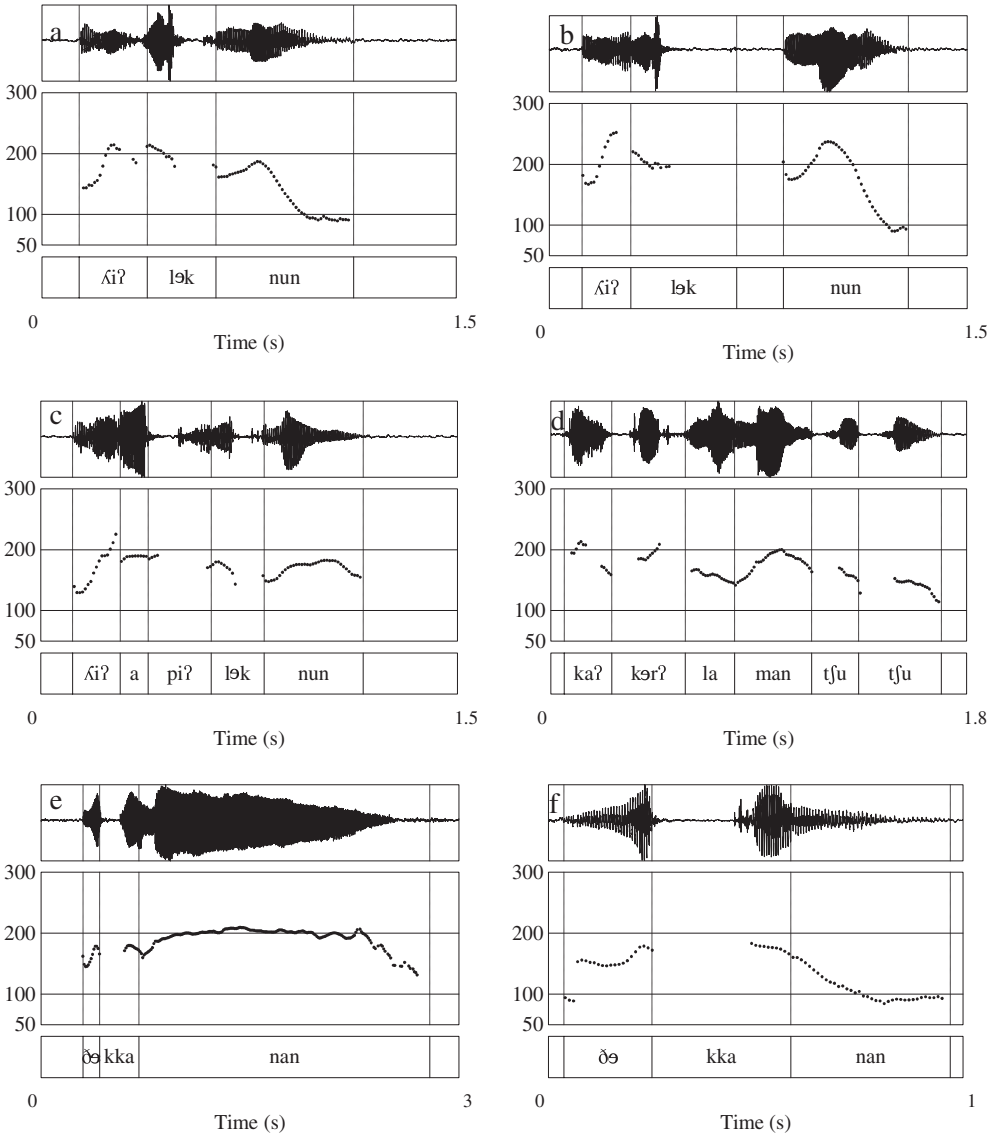

Figure 2 Intonation contours for declarative (panel a) and interrogative (panel b) /ˈʌiʔ.lək ˈnun/ 'I see a canoe/Do I see a canoe?' and for non-final /ʌiʔ. ˈa.piʔ.lək ˈnun/ 'I don't see a canoe' (panel c), as well as a command intonation for /ˈkaʔ.kəʔr la.ˈman.tʃu.tʃu/ 'Eat the meat of a white-lipped peccary!' (panel d), a vocative intonation on /ðək.ka.ˈnan/ 'paca (type of rodent)!' (panel e) and a declarative intonation for the same word /ðək.ˈka.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.

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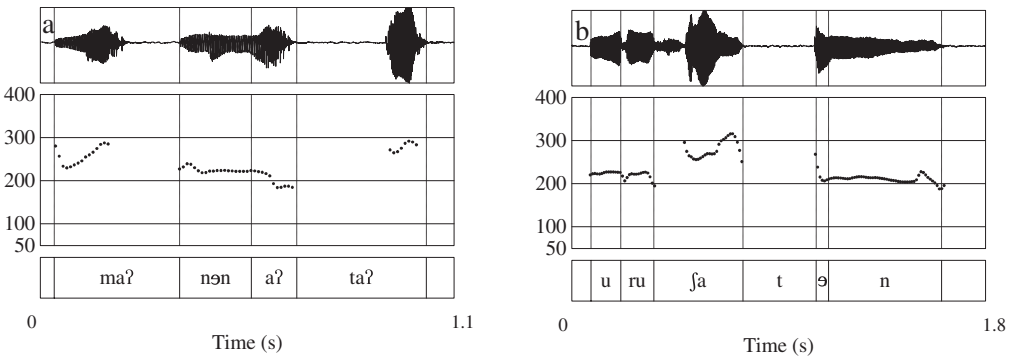

Figure 3 Intonation contours for interrogative /ˈmaʔ.nən aʔ.taʔ/ 'What is it?' and /u.ruˈʃa tən/ 'What a shame about my small deer' (panel b). Speaker E.

Transcription

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

(tan.ˈlu.wa) (kək.ˈki.lək) (in.ˈju.ta.pa.ʎi.naʔ) (ð̩ə.ˈni.paʔ aʔ.ˈpin.taʔ nan.ˈta.pi.tək) (ˈtan.naʔ) || (tan.ˈlu.wa) (ˈkək.ki i.ˈtu.ʎi) (ˈkwa.ka aʔ.ˈpin.taʔ kən.ˈmak.lan nan.ˈta.pi.tək.ku) || (tu.ˈsik) (kək.ˈki.lər naʔ.ˈpi.ʎi) (tu.ˈmuʔ.pa.la) (ˈkwa.ka aʔ.ˈpin.taʔ nan.ˈta.pi.tək.ku kən.ˈmak.lan) (i.ˈtu.ʎi) || (na.ˈnək.li.ma) (a.ˈlaʔ.saʔ) (ˈja.ʎiʔ ʎiʔ.ˈtu.ʎi) || (an.ˈpu.luʔ.tək i.ˈð̩i.mu.na.nən.lək in.ˈpuʔ.pi.tu.suʔ) (pək.ˈpi.kəʌ.ʎi) || (ˈna.nək ka.ˈtuʔ ˈð̩a.pər wa.ˈnə.ran.naʔ) (tan.ˈlu.wa kək.ˈki.lək tu.ˈʎi.naʔ) (ˈna.na) (uk.ˈa.pi.lə.raʔ.suʔ) (na.ˈnuk.ˈa.pi.lə.raʔ.suʔ) [NB: The final intonational phrase is a faster version of the preceding two] || (ð̩ən.ˈlə.ˈri.paʔ) (i.ˈð̩i.mu.na.nən aʔ.ˈð̩ək.ʎi) (na.ˈnaʔ.ka aʔ.ˈpin.taʔ nan.ˈta.pi.tək) (ən.ˈtaʔn i.ˈpaʔ.la a.sək ˈʎiʔ.kər) || (na.ˈnən.tu tan.ˈlu.wa) (ˈpək.kuʔ) (ˈpək.kuʔ) (ˈpək.kuʔ aʔ.ˈtu.ʎi) || (pək.ˈkuʔ.tu.ku.si.ki.ma ˈna.na ˈja.ʎiʔ) (aʔ.ˈpin.taʔ) (in.ˈsuʔ.wər.pi.ʎi) (na.na an.ˈpu.luʔ.tək i.ð̩i.mu.na.nən.lək) (in.ˈni.tʃiʔ.ɲi) (aʔ.ˈð̩ək.aʔ.suʔ) || (na.ˈnək.lan ˈkək.ki) (ˈkək.ki pək.ˈpi.ʎi) (na.ˈnək pin.ˈtu.ʎi) || (ˈʎiʔ.lər ‘ʎiʔ.ər.tu.sik) (ima) (na.ˈku.suʔ i.ˈkə.run.taʔ.ʎi ˈkək.ki) (ˈna.nək i.ma) (in.ˈsuʔ.wər.piʔ.suʔ) (ˈi.ɲər i.ˈð̩i.mu.na.nən) (ˈu.suʔ) (ˈð̩ək.ʎi pi.ˈɲik.lan) || (tan.ˈlu.wa.lər ˈna.nək i.ˈtu.ʎi ˈkək.ki) (tək.ˈkin.tʃi.nən) (kən.ma aʔ.ˈpin.taʔ nan.ˈta.pi.la ˈkwak.la) || (tək.ˈkin.tʃi kən.ˈma.lər aʔ.ˈð̩ək.la i.ˈð̩i.mu.na.nən) || (kwa.ˈlə.riʔ.na) (in.ˈni.tʃin.puʔ.wi.nək) (iˈpaʔ.la.ka ˈʎiʔ.ʎən) (i.ˈpaʔ.la.ka la.ˈtək.ʎən) (nan.ˈta.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

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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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