Accent and tone: the double origin of the Paicî prosodic system

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Abstract

What happens when an accentual language develops a tonal contrast from laryngeal features: is the accent system kept alongside the new tone contrast? Is it lost? Do both prosodic systems merge? In this paper, I present the tone system of Paicî, which illustrates the latter outcome. Paicî seems to possess two integrated prosodic subsystems: a purely tonal H vs. L contrast, and a typologically unusual downstep with accentual properties. Building on Rivierre (1978), I show that a comparison with neighboring Xârâcùù, where accent is marked by a similar downstep, explains this apparently mixed system: the H/L tonal contrast emerged through tonogenesis in an already accentual language, where accent was marked by a downstep just like in Xârâcùù. This caused the former downstep to be reinterpreted as tonal. The Paicî case is interesting for the study of the interactions between accent and tone, both in synchrony and in diachrony.

Keywords: tone, accent, downstep, Paicî, Xâracùù, Oceanic, New Caledonia

1 Introduction

Tone mostly originates from the phonologization of redundant f_0 differences caused by segmental laryngeal features (Michaud & Sands 2020, a.o.). Languages where tone originates from prosodic features (e.g. accent) appear to be rare (e.g., Scandinavian languages, cf. Kingston 2011, a.o.). What has yet to be fully documented is what happens when an accentual language develops a tonal contrast from laryngeal features: is the accent system kept alongside the new tone contrast? Is it lost? Do both prosodic systems merge?

In this paper, I present the peculiar word-prosodic system of Paicî (Oceanic, New Caledonia) and its history, which illustrates the latter outcome. The Paicî tone system was first described by Rivierre (1974). Building on Rivierre's pioneering work, I show in Lionnet (2022) that the tonal inventory of Paicî consists of two tones – high (H) and low (L) – and an underlying downstep /↓/. A fully predictable, metrically conditioned downstep is also attested. This system is particularly interesting because it superficially seems to be split in two subsystems, each one corresponding to the two prototypical word-prosodic systems defined by Hyman (2006): The two tones H and L behave exactly as one would expect in a prototypical TONE system, while downstep, although demonstrably not a form of accent in synchrony, shares properties with *bona fide* ACCENT systems. In an article published in 1978, Rivierre briefly highlights the similarities

between the Paicî downstep (which he does not analyze as such) and the accentual system of Xârâcùù, another Oceanic language of New Caledonia, and puts forth the hypothesis that the Paicî downstep was originally accentual.

The goal of this paper is threefold. First, I synthesize Rivierre's (1978) seminal insight and proposal about the relationship between the prosodic systems of Paicî and Xârâcùù, thus making Rivierre's important findings more accessible to the non-francophone readership. Second, I further develop and illustrate Rivierre's analysis of the Xârâcùù accent system using data collected by Rivierre himself, but never published before. And third, I elaborate on and recast Rivierre's analyses of the Paicî and Xârâcùù prosodic systems using modern phonological theory and representations, in order to highlight important properties of these languages as well as their theoretical, typological, and diachronic relevance. Specifically, I show that the prosodic property that Rivierre (1978) rightly identified as shared between Xârâcùù and Paicî is best analyzed as a downstep conditioned by metrical structure involving both the bimoraic foot and the dipodic colon.

The paper is structured as follows. Section 2 describes the main aspects of the Paicî word-prosodic system. Section 3 then describes the unusual Xârâcùù accent system and highlights the striking points of resemblance with Paicî. Section 4 argues that the Paicî downstep originates from a similar accent system predating tonogenesis. Finally, Section 5 concludes and highlights the relevance of Paicî for the diachronic study of prosodic systems.

2 The Paicî prosodic system: tone (and accent?)

Paicî is one of the five tonal languages of New Caledonia, all Oceanic (cf. Rivierre 1993, 2001 and references therein).

These languages are famous for being among the very rare Oceanic languages that have developed tone without any external influence.[1]

The first description of the Paicî tone system was proposed by Rivierre (1974). This section is a self-sufficient summary of the main properties of this system, in the reanalysis proposed by Lionnet (2022), the key elements of which are the notion of downstep (hinted at by Rivierre but not fully developed in his 1974 article) and the metrical conditioning of this downstep, involving the bimoraic foot and the dipodic colon.

The Paicî data are taken both from Rivierre's (1974, 1983) published work, and from my own fieldwork in 2017 and 2019 with two native speakers: Hélène Nimbaye and Anna Gonari.[2] The recordings made in the field and their transcriptions are openly accessible in the California Language Archive (Lionnet & Gonari 2020a,b, Lionnet & Nimbaye 2020). References to this archived material are systematically given for every relevant example.[3] References to Rivierre's (1967) recorded text *Le Maître de Göbwinyârâ*, openly accessible in the online Pangloss collection, are indicated with the initial G followed by the relevant time code.

[1]The languages of the Northern Huon linkage in Papua New Guinea are the only other known cases within Oceanic (cf. Ross 1993 and references therein).

[2]Speaker participation and informed consent were obtained in accordance with Princeton University IRB protocol #10346.

[3]In the form DateYYMMDD-RecordingNumber-SpeakerInitials:AnnotationNumberInELAN, e.g. 191121-12-AG1:8.

2.1 Segmental inventory and phonotactics

The Paicî segmental inventory is given in (1) and (2) below.

(1) Paicî vowels (V̰ = nasal vowel)

i	ɨ	u	ḭ	ɨ̰	ṵ
e	ə	o			
ɛ	ʌ	ɔ	ɛ̰	ʌ̰	o̰
	a			a̰	

(2) Paicî consonants

Voiceless stop	p	pw	t	c	k
Prenasalized stop	b [ᵐb]	bw [ᵐbw]	d [ⁿd]	j [ᶮɟ]	g [ᵑg]
Nasal stop	m	mw	n	ny [ɲ]	ng [ŋ]
Approximant		w	r, l		

There are no codas or consonant clusters in Paicî, and sequences of up to four vowels are attested (e.g. /àùa̰à̰/ 'footprint').

2.2 Tonal inventory in lexical items

The tonal inventory found in lexical (i.e., non-grammatical) items in Paicî is simple, with only two tonemes, H and L. 93% of lexical items are isotonic, i.e., carry the same tone throughout, as illustrated with the minimal pairs in (3).

(3)

/mṵ́/	'smoke'	/mṵ̀/	'flower'
/pʌ̰́dí/	'to hit, to thrash'	/pʌ̰̀dì/	'to divide'
/údʌrɨ́/	'to catch on fire'	/ùdʌrɨ̀/	'to disjoin'
/tɔ́ɔ́wa̰ŕḭ́/	'to accompany (music) in rhythm'	/tɔ̀ɔ̀wà̰rḭ̀/	'to reimburse'

The remaining 7% non-isotonic lexical items are mostly frozen compounds, recent loanwords, grammatical words, or interjections.

Tonal contrasts in lexical items are thus rather straightforward, and require only two tonemes: H vs. L.[4] The complexity of the prosodic system comes from the two types of downstep attested in Paicî: a fully predictable phonological downstep, and an underlying downstep found in about 20 tonal enclitics, both discussed in the next section.

2.3 Phonological downstep

In isotonic L-toned words of at least four morae, a downstep is systematically observed after the second mora, as illustrated in (5). This does not occur in L-toned words of 1 to 3 morae, as seen in (4), nor is it ever seen in H-toned words.

(4)

1μ:	/ù/	[ù]	'breath'
2μ:	/cʌ̰mḭ̀/	[cʌ̰mḭ̀]	'to plant'
3μ:	/ùdʌrɨ̀/	[ùdʌrɨ̀]	'to disjoin'

[4] A H vs. Ø analysis would be possible if it weren't for the marginal non-isotonic items and the predownstepped L-toned enclitics, as discussed in section 4.1.

(5) 4μ: /àùkɔ̀ɔ̀/ [àù$^{\downarrow}$kɔ̀ɔ̀] 'kagu bird'
5μ: /pwèrètɔ̀ɔ̀tɨ̀/ [pwèrè$^{\downarrow}$tɔ̀ɔ̀tɨ̀] 'wind'

Evidence for an analysis of this pitch lowering effect as downstep (rather than a third tone height) comes from the fact that the lowered register is maintained for the remainder of the utterance, or until a new downstep lowers it one step further. This is shown in the utterance in (6), which contains four successive downsteps. The tonal make-up of the utterance is given on the second line, and the schematic realization of the pitch targets are shown on the third line. As seen, each downstep lowers the register ceiling and floor by one step, yielding the terracing effect typical of downstep (cf. Connell 2011). H and L are realized as heights 5 and 4 respectively in the first register, as 4 and 3 in the second one, and the L tone in the following three lowered registers is realized 2, 1.5, and finally 1.[5]

(6) á è =$^{\downarrow}$mwàà tɨ̀-nʌ́pó gɔ̀ =$^{\downarrow}$ì dà =kɛ̀$^{\downarrow}$ɛ̀ =wʌ̀ pwìrì$^{\downarrow}$dùà
[H L] $^{\downarrow}$[L L-H L] $^{\downarrow}$[L L L]$^{\downarrow}$[L L L]$^{\downarrow}$[L]
[5 4] $^{\downarrow}$[3 3-4 3] $^{\downarrow}$[2 2 2]$^{\downarrow}$[1.5 1.5 1.5]$^{\downarrow}$[1]
and (s)he =SUCC adjust-propeller on =DEF spear =his =SBJ (name)
'And Pwiridua adjusts the propeller on his spear.' (G:06'40")

The automatic downstep pattern illustrated in (5) is evidence that the tone bearing unit (TBU) in Paicî is the mora (μ), and that the downstep pattern is metrically condioned: a downstep is inserted between two L-toned bimoraic feet. This explains the 4-mora threshold: it takes at least four morae to parse two bimoraic feet. This analysis is illustrated in (7).

(7) a. 1μ: /ù/ [ù] 'breath'
2μ: /cʌ̀mì/ [(cʌ̀mì)] 'to plant'
3μ: /ùdʌrɨ̀/ [(ùdʌ)rɨ̀] 'to disjoin'
b. 4μ: /àùkɔ̀ɔ̀/ [(àù)$^{\downarrow}$(kɔ̀ɔ̀)] 'kagu bird'
5μ: /pwèrètɔ̀ɔ̀tɨ̀/ [(pwèrè)$^{\downarrow}$(tɔ̀ɔ̀)tɨ̀] 'wind'

However, the bimoraic foot is not sufficient to account for the full range of metrically conditioned tonology in Paicî. Indeed, there is evidence that no foot structure is parsed in bi- and trimoraic words. This evidence comes from the realization of a grammatical H tone marking certain head + complement constructions, e.g. verb + incorporated object, genitive head + complement, derivational prefix + verb/noun, etc. This grammatical 'juncture' H tone is assigned to the initial mora of a 1∼3μ complement, to the initial foot if the complement has at least four morae. This is illustrated with the middle prefix /pì-^{H}/ in (8)a and b respectively, where the foot evidenced by the realization of the juncture H is indicated in parentheses.

(8) a. 1μ /pì-^{H}cɔ̀/ [pì-cɔ́] 'to move forward'
2μ /pì-^{H}wʌ̀dò/ [pì-wʌ́dò] 'to get drunk' *[pì-(wʌ́dó)]
3μ /pì-^{H}tʌmʌ̀rì/ [pì-tʌ́mʌ̀rì] 'to give birth' *[pì-(tʌ́mʌ́)rì]
b. 4μ+ /pì-^{H}nʌ̀jàìrì/ [pì-(nʌ́já)ìrì] 'to curse' *[pì-nʌ́jàìrì]
/pì-^{H}tɔ̀ɔ̀wʌ̀rì/ [pì-(tɔ́ɔ́)wʌ̀rì] 'to reimburse' *[pì-tɔ́ɔ́wʌ̀rì]

[5](6) contains both phonological downsteps and underlying downsteps (discussed in section 2.4). The exact analysis of this utterance is irrelevant here.

If the realization of the juncture H is taken as a diagnostic for the presence of foot structure, then one must account for the absence of foot structure in bi- and trimoraic words, despite the presence of enough morae to parse one bimoraic foot. This is accounted for if foot parsing is seen as licensed by a dipodic colon—a prosodic consitutent made of two feet. That is, one can parse a bimoraic foot only if there is enough material to parse a colon. This analysis, which explains the 4-mora threshold necessary for foot parsing, is illustrated in (9), where cola are shown in labeled parentheses $(...)_{\kappa}$.

(9)	a.	1μ	/pì-^{H}cɔ̀/	[pì-cɔ́]	'to move forward'
		2μ	/pì-^{H}wa̰dò/	[pì-wá̰dò]	'to get drunk'
		3μ	/pì-^{H}tʌ̀mà̰rì/	[pì-tʌ́mà̰rì]	'to give birth'
	b.	4μ+	/pì-^{H}nà̰jàìrì/	[pì-((ná̰já)(ìrì))$_{\kappa}$]	'to curse'
			/pì-^{H}tɔ̰̀ɔ̰̀wà̰rì/	[pì-((tɔ̰́ɔ̰́)(wà̰rì))$_{\kappa}$]	'to reimburse'

The domain of foot and colon parsing—i.e., the domain of application of this fully predictable downstep—is the prosodic word, which consists of a lexical item (the 'tonal nucleus') and all following suffixes and tonal enclitics (for the latter, see section 2.4). This is illustrated with the third person singular toneless suffix /-e/ 'its/her/his (inalienable)' in (10) and the toneless enclitic /=kḛḛ/ 'its/her/his (alienable)' in (11), where it is seen that the mora count involved in determining downstep insertion includes the first mora of the enclitic. Note that, to simplify transcriptions, cola are henceforth not indicated.

(10)	a.	/mà̰jòrò/	[mà̰jòrò]	'origin, reason'
	b.	/mà̰jòrò-e/	[(mà̰jò)$^{\downarrow}$(rò-è)]	'its origin, its reason' (Rivierre 1983: 142)

(11)	a.	/pwɛ̰̀ɛ̰̀dì/	[pwɛ̰̀ɛ̰̀dì]	'younger brother'
	b.	/pwɛ̰̀ɛ̰̀dì =kḛḛ/	[(pwɛ̰̀ɛ̰̀)$^{\downarrow}$(dì =kɛ̰̀)ɛ̰̀]	'his younger brother' (G:07'31")

Phonological downstep applies within the prosodic word only. Long strings of L-toned morae with no downstep are possible, if each individual prosodic word within the string has a maximum of three morae. This is shown in (12) with an utterance consisting of eight independent mono- and bimoraic prosodic words, all but the last one L-toned. As seen, no downstep is inserted in the sequence of 11 L-toned morae formed by the first seven prosodic words.

(12)	/gʌ̀ù	nà̰bwè	bàà	gò	jɛ̀	nìḭ̀	pò^{H}	mɔ̰̀ɔ̰̀/
	[gʌ̀ù	nà̰bwè	bàà	gò	jɛ̀	nìḭ̀	pò	mɔ́ɔ̰̀]
	you.two	end	because	I	PFV	alas	very	cold
	'Stop, for I am freezing.' (G:18'02")							

2.4 Underlying downstep in tonal enclitics

Paicî has a total of 80 tonal enclitics, i.e., prosodically weak function words which cannot head their own prosodic word, and are systematically integrated into the preceding prosodic word. Evidence for prosodic integration is twofold: most enclitics, being toneless, receive their tonal specification from the preceding prosodic word, and the domain of colon- and foot-parsing within a prosodic word extends to the following enclitics (as shown in (15)). Rivierre (1974)

identified three types of tonal enclitics, which I reanalyze as (i) toneless enclitics, already illustrated in 11 above with possessive /=kẹ̱ẹ̱/; (ii) downstepped toneless enclitics; and (iii) downstepped L-toned enclitics.[6]

Downstepped toneless enclitics are realized H after a H-toned nucleus, and downstepped ↓L after a L-toned nucleus. The tone of the tonal nucleus spreads to the toneless enclitic. If that tone is L, the underlying downstep of the enclitic is realized. If the tonal nucleus is H-toned, the downstep is deleted, by virtue of a general tonotactic constraint against the coexistence of H and downstep within the prosodic word (*H/↓), which suffers no exception (cf. Lionnet 2022 for more detail).

This is illustrated (13)a and b with the preposition/=↓wʌ/ introducing the subject.[7]

(13) a. /á̱ è =↓mwa̱a̱^{H} ína̱ =↓wʌ pwìrìdùà.../
[á̱ è =↓mwa̱a̱ ⟨ína̱ =wʌ́⟩ pwìrì↓dùà...]
and (s)he =PCT say =SBJ (name)
'And Pwiridua then said...' (G:16'19")

b. /è tɔ̀ =↓wʌ dùì/
[è ⟨tɔ̀ =↓wʌ̀⟩ dùì]
(s)he enter =SBJ (name)
'Dui comes/goes in.' (201121-04-AG1:5)

Finally, downstepped L-toned enclitics are also attested, which are always realized at a lower pitch as the preceding TBU: L after a H-toned nucleus (the downstep being deleted by virtue of the *H/↓ constraint), and ↓L after a L-toned one. This is illustrated with the determiner /=↓ì/ in (14)a and b respectively.

(14) a. /na̱ =↓ì àu-^{H} ítʌ́ jàwè/
[⟨na̱ =ì⟩ àù- ítʌ́ jàwè]
in =DET place.of- run water
'in the waterhole' (171228-01-HN1:197)

b. /gɔ̀ =↓ì jɛ̀^{H} dìtʌ̀-rʌ bwə̀/
[⟨gɔ̀ =↓ì⟩ jɛ̀ dítʌ̀-rʌ̀ bwə̀]
on =DET INDF branch-of banyan
'on a the branch of a banyan tree' (171228-02-HN1:136)

The downstep in the latter two types of enclitics has to be analyzed as underlying, because it is not predictable. In particular, it is realized even when the 4-mora threshold is not met, as shown in (13)b and (14)b above.

Finally, the enclitic status of the downstepped toneless and downstepped L-toned enclitics is evidenced by the fact that they count toward the 4-mora threshold at work in the phonological

[6]Rivierre (1974) actually discusses a fourth type of enclitic: a handful of grammatical words whose initial mora is realized with the opposite tone from the immediately preceding tone. Since these do not have anything to do with prosodic phrasing, I do not analyze them as clitics.

[7]Many of the tonal enclitics of Paicî, such as the subject marker /=wʌ/ in (13) or the determiner /=↓i/ in (14), are 'ditropic' enclitics (Cysouw 2005: 18; Spencer & Luis 2012; Himmelmann 2014), i.e., they are morphosyntactically grouped with the following morpheme or phrase (often their complement), but prosodically integrated into the preceding prosodic word.

downstep insertion process described in section 2.3. This is shown in (15), where the downstep between [=mɛ̀] and [=nì] in (15)a and in [mwɑ̀↓rɑ̀] in (15)b can only be phonological, i.e., metrically derived. This means that the subject marker /=↓wʌ/ in (15)a and determiner /=↓ì/ in (15)b constitute the fourth mora of the prosodic words headed by /tɔ̀/ 'to enter' and /tɑ̀/ 'to fly' respectively.

(15) a. /è tɔ̀ =mɛ̀ =nì =↓wʌ dùì/
[è ⟨(tɔ̀ =mɛ̀) ↓(=nì =wʌ̀)⟩ dùì]
(s)he enter toward.here =here =SBJ (name)
'Dui comes in here.' (191121-04-AG1:7)

b. /è tɑ̀ =mwɑ̀rɑ̀ =↓ì mʌ̀rɨ̀/
[è ⟨(tɑ̀ =mwɑ̀)↓(rɑ̀ = ì)⟩ mʌ̀rɨ̀]
it fly =again =DET bird
'The bird flies off again.' (171228-02-HN1:145)

Note that the underlying downstep in /=↓wʌ/ and /=↓ì/ is not realized in the two examples in (15). This fact illustrates a very interesting property of downstep in Paicî: its culminativity within the prosodic word, where only one downstep is allowed. Whenever more than one downstep is present in a L-toned prosodic word, only the leftmost downstep is kept, all following downsteps being deleted. This is the case in the two examples in (15) above, where the prosodic words headed by /tɔ̀/ in (15)a and /tɑ̀/ in (15)b both contain two downstep sources: an underlyingly downstepped enclitic (/=↓wʌ/ and /=↓ì/ respectively), and the fact that in both cases the L-toned prosodic word reaches the 4-mora threshold for the application of phonological downstep. As seen in both cases, the leftmost downstep is the only one that is realized.

The existence of these two types of underlyingly downstepped enclitics is evidence that downstep is its own phonological object in Paicî, independent of tone.[8] There are thus three tonemes (or 'lexical prosodemes') in Paicî: /H/, /L/, and /↓/.

2.5 Accentual properties of the Paicî downstep

The Paicî downstep has two properties that are typical of accent systems: it is (partly) metrically conditioned, and culminative within the prosodic word. This gives the impression of two parallel prosodic systems in Paicî: a H vs. L tonal contrast, and a downstep-based accent.

'Accent' is typically conisdered to combine three core properties: (i) CULMINATIVITY, i.e. there is at most one accent per word; (ii) DEMARCATIVITY, i.e. accent marks the edge of a prosodic constituent; and (iii) OBLIGATORINESS, i.e. every lexical word must have at least one accent (cf. Downing 2010 and references therein).[9]

We have seen already that downstep is culminative in Paicî. This culminativity conspires with the metrical conditioning of phonological downstep to make it demarcative as well. Indeed, downstep is always found within the first three morae of the prosodic word (any downstep further

[8]Cf. Lionnet (2022) for a full analysis in terms of tone vs. register features, represented on two separate autosegmental tiers.

[9]Hyman (2006, 2011) shows that culminativity and obligatoriness are not specific to accent systems, and are found in some tonal languages as well.

into the prosodic word is trumped by the phonological downstep systematically triggered when the 4-mora threshold is reached), thus highlighting its left edge.

However, downstep fails to meet the obligatoriness criterion – which Hyman (2006) considers to be definitional of accent. Indeed, downstep is only ever found in L-toned prosodic words that reach the 4-mora threshold or include a downstepped enclitic. Notably, downstep never affects H-toned words, which constitue about one third of the lexicon. Downstep is thus not a form of accent.

There are two additional reasons for which downstep cannot be viewed as an accent system separate from tone. First, metrical conditioning is not characteristic of downstep only, but also plays a role in the realization of the juncture H-tone, as we saw in (9) above. Secondly, downstep and tone interact, as clearly shown by the mutual incompatibility of H and downstep (*H/$^{\downarrow}$) and the resulting downstep deletion rule illustrated in (13)a and (14)a above.

I show in section 4 that the accentual flavor of downstep in Paicî is likely due to its accentual origin, which is revealed by a comparison with the neighboring Xârâcùù language. Before this can be demonstrated, however, the prosodic system of Xârâcùù must be presented, which is the focus of the next section.

3 The Xârâcùù accent system

Being familiar with Paicî, Jean-Claude Rivierre was struck by the similarities he noticed with the prosody of Xârâcùù [xa̱ra̱$^{\downarrow}$ci̱i̱], another Oceanic language of New Caledonia, which he briefly describes in Rivierre (1978). Apart from Rivierre's (1978) article, no description or analysis of the phonology of the language exists.[10] As shown by Rivierre, Xârâcùù is not a tonal language, but has a very intriguing accentual system.

In this section I propose a description of the relevant aspects of the Xârâcùù prosodic system based mostly on Rivierre's (1978) published article. I supplement Rivierre's description with data taken from his original untranscribed field recordings with native speaker Gui Tamai (Rivierre & Tamai 1977a,b), openly accessible in the online Pangloss collection.[11] I transcribed the entirety of these recordings, and present some of the data they contain in this section, published here for the first time. These data illustrate patterns that Rivierre does not report on in his 1978 article, as we will see. Finally, I propose a reanalysis of the Xârâcùù accent system in terms of a metrically conditioned downstep.

3.1 Metrical conditioning of the Xârâcùù accent

Every lexical word in Xârâcùù is marked by a pitch drop at the left edge of the word. This pitch drop occurs after the first mora in words of less than four morae, after the second mora in words of four morae and above. This is illustrated in (16) and (17) respectively, where I transcribe the accentual pitch drop as a downstep, in accordance with the analysis I propose in the remainder of this section. Note that, as expected, accent is inaudible on monomoraic words in isolation, for lack of a second mora to realize the downstep. However, it is realized in "coupled" constituents,

[10] For a description of Xârâcùù syntax, see Moyse-Faurie (1995). Two dictionaries are available: Grace (1975) (Xârâcùù-English) and Moyse-Faurie & Néchérö-Jorédié (1989) (Xârâcùù-French).

[11] Reference to these recordings will use the abbreviations 'RT1' and 'RT2' respectively, followed by the relevant time code.

discussed in section 3.2 below. I accordingly represent the accentual downstep in parentheses in phonetic transcriptions of monomoraic words in isolation.

(16)	1μ	/nu̱/	[nu̱(↓)]	'coconut tree' (RT1: 2'01")
	2μ	/bwii/	[bwi↓i]	'taro var. ' (RT1: 0'13")
		/katɔ/	[ka↓tɔ]	'support' (RT1: 17'51")
	3μ	/pooɸi/	[po↓oɸi]	'pocket, bag' (RT1: 00'25")
		/ka̱mu̱ru̱/	[ka̱↓mu̱ru̱]	'person' (RT1: 17'02")
(17)	4μ	/kɔrɔpaa/	[kɔrɔ↓paa]	'outrigger boat' (RT1: 07'31")
		/pɛtɛɛtɛ/	[pɛtɛ↓ɛtɛ]	'potato' (RT1: 00'30")

The parallel with the Paicî phonological downstep is striking, as noted by Rivierre. I contend that it invites a similar, metrically conditioned analysis: the accent-marking pitch drop occurs between the first two bimoraic feet within the word, or between the first two morae if there are not enough morae to parse a colon. Like in Paicî, feet may be parsed only if they are part of a colon. This explains why the pitch drop occurs after the first mora in bi- and trimoraic words, in which there is not enough material to parse a colon. This analysis is illustrated in (18) below (cf. (9) above).[12]

(18)	1μ	/nu̱/	[nu̱(↓)]		'coconut tree'
	2μ	/katɔ/	[ka↓tɔ]	*(katɔ)(↓)	'support'
	3μ	/ka̱mu̱ru̱/	[ka̱↓mu̱ru̱]	*(ka̱mu̱)↓ru̱	'person'
	4μ	/kɔrɔpaa/	[((kɔrɔ)↓(paa))$_{\kappa}$]		'outrigger boat'

The accentual pitch drop satisfies all three of the accent-defining criteria discussed in section 2.5 above. As shown by Rivierre, it is culminative (there may only be one per word) and obligatory (every lexical word has one, although whether and how it is realized depends on context, as is expected with accent). It is also demarcative, as it highlights the left edge of the word – specifically the intial mora or foot. It is thus unambiguously accentual. It is also fully predictable.

3.2 Xârâcùù accent as downstep: "coupling" and prosodic integration

Evidence in favor of my analysis of this pitch drop as a downstep comes from one of the most interesting aspects of Xârâcùù grammar, at the interface between morphosyntax and prosody: what Rivierre (1978) calls "coupling" (*couplage*). The detailed analysis of the syntactic properties of coupling has yet to be carried out, and is beyond the scope of the present paper (as it was beyond the scope of Rivierre's original article). "Coupling" consists in marking certain morphosyntactic dependencies by integrating the head and its dependent (or modifier) into one single prosodic phrase. These dependency relations are similar to the ones involving the juncture H tone in Paicî (cf. (8) & (9) above and surrounding prose): derivational prefixes and the

[12]One may argue that the colon is unnecessary if the accent placement rule is stated as above, i.e., as occurring between two bimoraic feet. Indeed the environment of the rule is not met in bi- and trimoraic words where there is not enough material to parse the second foot. However, it would be hard to explain why accent placement is blind to foot structure in a form like /ka̱mu̱ru̱/ → [(ka̱↓mu̱)ru̱]. It is much more likely that foot structure is entirely absent from such a form, which is explained if foot parsing is licensed only within a colon.

root they combine with, some tense-aspect markers and the following verb, the head of a genitive construction and its complement, the noun and its following modifying adjective, among others (cf. Rivierre 1978 for more examples). This is ilustrated in (19) below with two examples of a noun + modifying adjective structure. Coupling is indicated with a "+" sign between the coupled elements, and the prosodic phrase formed by the coupled elements is represented with braces {...}. To simplify the transcription, metrical structure is no longer indicated. I use a 1-to-5 scale to transcribe relative pitch realization, with 1 representing the lowest point.

(19) a. /xwa̱kwe + mɛ̱gi/
{xwa̱$^{5\downarrow}$kwe^{3} + mɛ̱$^{3\downarrow}$gi^{1}}
spring hot
'hot spring' (RT1: 11'27")

b. /ka̱ra̱mɛ̱ -rɛ + kɔ̱dɔ/
{ka̱^{5}ra̱$^{5\downarrow}$mɛ̱^{3} -rɛ^{3} + kɔ̱$^{3\downarrow}$dɔ^{1}}
eye -his/her blue
'his blue eyes.' (RT1: 49'16")

As can be seen, the main characteristic of the prosodic phrase created by coupling is that the words it is made of are realized within the same register. Note that each word keeps its accent: the accentual pitch drop is heard in both [xwa̱$^{5\downarrow}$kwe^{3}] and [mɛ̱$^{3\downarrow}$gi^{1}] in (19)a, in both [ka̱^{5}ra̱$^{5\downarrow}$mɛ̱^{3}-rɛ^{3}] and [kɔ̱$^{3\downarrow}$dɔ^{1}] in (19)b.[13] However, the accented initial mora or foot of the second word (dependent or modifier) is realized at the same pitch as the (non-accented) end of the immediately preceding word (pitch of 3 in both examples). The effect of coupling is thus not to delete the accent of the non-head element, but to subordinate it to the accent of the head, by integrating it into the same register, in which the head is prosodically "dominant" and the dependent "recessive", to use the apt terminology proposed by Rivierre (1978). I will accordingly call these coupled prosodic phrases REGISTER SPANS.

An utterance may consist of more than one register span, each new span being marked by register resetting, i.e., raising of the register ceiling back to a higher pitch. Register resetting or its absence can thus be used as a diagnostic for prosodic integration (coupling) or lack thereof. Absence of prosodic integration of the noun and the following adjective in the two examples in (19) above would yield a predicative interpretation of the adjectives. This is illustrated in (20)a-b, which constitute prosodic minimal pairs with (19)a-b respectively. As can be seen in these two examples, the register is reset to the highest pitch of 5 on the initial mora or foot of the predicative adjective, indicating that the adjective is not recessive, but prosodically independent (register resetting is represented with the symbol "⇑").[14]

(20) a. /xwa̱kwe mɛ̱gi/
{xwa̱$^{5\downarrow}$kwe^{1}} ⇑ {mɛ̱$^{5\downarrow}$gi^{1}}
spring hot
'The spring is hot.' (RT1: 11'30")

[13]Contrary to what Rivierre says about bimoraic words losing their accent under coupling, a point to which I come back later in this section.

[14]Note that register resetting does not always bring the ceiling back up to the highest pitch level: the reset pitch ceiling is often less high than that of the preceding register span, as could be expected.

b. /kạrạmɛ̰-rɛ kɔ̰dɔ/
{kạ^{5}rạ$^{5\downarrow}$mɛ̰^{1}-rɛ^{1}} ⇑ {kɔ̰$^{5\downarrow}$dɔ^{1}}
eye-his/her blue
'His eyes are blue.' (RT1: 49'09")

Note that the exact realization of accent under coupling, which depends on the length of each of the coupled elements, is complex and was not elucidated by Rivierre himself, who does not exhaustively illustrate all possible combinations in his 1978 article, and notes some variation. From the recordings I was able to transcribe, the following regularities emerge. When the dominant element is monomoraic, its accent is realized on the initial mora or foot of the following recessive element, as in /de + kạmụrụ/ → {de + $^{\downarrow}$kạ$^{\downarrow}$mụrụ} (another + person) 'another person' (RT1:07'35") (see also (22) below). Words of four morae and above robustly keep their accent in all positions, e.g. /kɔrɔpaa + kɛrɛnãwã/ → {kɔrɔ$^{\downarrow}$paa + kɛrɛ$^{\downarrow}$nãwã} (outrigger + yellow) 'yellow outrigger boat' (Rivierre 1978: 420). Bimoraic words, however, are much less regular, and seem to undergo optional accent displacement or deletion. For example, a sequence of two coupled bimoraic words may be realized with their expected respective accents, as schematized in (21)a and illustrated in (19)a above; or as in (21)b, where the accent of the recessive word is not realized; or as in (21)c, where not only the recessive accent is not realized, but the dominant one is displaced to the juncture between the two words (the latter two realizations are the only ones reported by Rivierre, with (19)c presented as the normal realization, and (19)b deemed acceptable by the consultant).

(21) /μμ + μμ/ → a. {μ$^{\downarrow}$μ + μ$^{\downarrow}$μ}
b. {μ$^{\downarrow}$μ + μμ}
c. {μμ + $^{\downarrow}$μμ}

An exact description of the realization of accent under coupling, for which more data is needed than is currently available, is beyond the scope of this paper, and will be the object of future research. Whatever the details of accent realization, prosodic integration into register spans or lack thereof (as indicated by regiser resetting) is always clear, and is what matters for the present paper.[15]

Register spans are characterized by a stricly downward melody, which falls in successive steps corresponding to the successive accent-marking pitch drops, producing the terracing effect typical of downstep (cf. Connell 2011, a.o.). Crucially, the pitch may never go up within a register span. Upward pitch movement can only be triggered by register resetting, when a register span boundary is crossed. This is straightforwardly explained if accent is indeed analyzed as a downstep.[16]

The terracing effect is also clearly at work in register spans consisting of several embedded "coupled" elements – another argument in favor of the downstep analysis. This is shown in

[15]As noted by Rivierre, accent is less and less perceptible as one moves away from the first word in long register spans involving multiple levels prosodic embedding. The first accentual downstep usually already takes the speaker down to the lower half of their pitch range, which leaves very little room for any further downward contrasts.

[16]As opposed to, e.g., a tonal analysis whereby accent marking would consist in the assignment of a H tone to the initial mora or foot of the word, or a HL melody to the entire word with anchoring of the H on the initial mora or foot. Such an analysis, while not strictly speaking impossible, would less straightforwardly account for the pitch terraces and strictly descending melody within "coupled phrases". There is no room in this paper for a detailed comparison of these two analyses.

(22), where the dominant morpheme /dɛ/ 'another' is coupled with the phrase /dɔ + kɔrɔpaa + pwa̱ra̱/, itself made of the dominant morpheme /dɔ/ 'true, genuine' coupled to the noun + modifying adjective couple /kɔrɔpaa + pwa̱ra̱/. As seen, this whole phrase is integrated into one single register span with as many successive pitch drops, i.e., downsteps, as there are accented morae or feet within the span.

(22)	/dɛ	+	dɔ	+	kɔrɔpaa	+	pwa̱ra̱/
	{dɛ^{5}	+	$^{\downarrow}$dɔ^{3}	+	$^{\downarrow}$kɔ^{2}rɔ$^{2\downarrow}$pa^{1}a^{1}	+	pwa̱^{1}ra̱^{1}}
	another		true		outrigger.boat		white

'another true white outrigger boat' (RT1: 14'01")

4 A history of the Paicî prosodic system

As seen in the preceding section, the accentual downstep of Xârâcùù bears a striking resemblance to the phonological downstep of Paicî. Rivierre (1978) hypothesizes that the two systems are likely historically related, and that the appartent bipartite prosodic system of Paicî is explained by its double historical source: tonogenesis (section 4.1) and a preexisting accent system (section 4.2). In this section, I elaborate on Rivierre's hypothesis and flesh it out with the metrical analyses proposed in the preceding sections.

4.1 Tonogenesis: the origin of the H vs. L contrast

We have seen that the H vs. L tonal contrast in Paicî is typologically rather unsurprising. This is true both in synchrony and in diachrony. Indeed, as demonstrated by Rivierre (1993, 2001), the H vs. L tonal contrast in Paicî originates in the transphonologization of a former aspiration contrast on voiceless stops (C^{h} vs. C) and voicing contrast on sonorants (N̥ vs. N) (C^{h} and N̥ are henceforth referred to as "aspirated consonants").[17] This is one of the most cross-linguistically frequent types of tonogenesis (cf. Hombert 1978; Hombert et al. 1979). It is summarized in (23).[18]

(23)	a.	Aspiration contrast:	*C^{h}V & *N̥V	vs.	*CV & *NV	
	b.	H vs. Ø:	CV́ & NV́	vs.	CV & NV	(innovation of H)
	c.	H vs. L:	CV́ & NV́	vs.	CV̀ & NV̀	(tonemicization of L)

This scenario involves two steps: the innovation of a H tone in (23)b, and the tonemicization of the L tone in (23)c. The last step is justified by the fact that in present-day Paicî, L must be recognized as an underlying toneme in at least two types of morphemes: non-isotonic words (the L tone in [pwá̱á̱dà] 'end' cannot be the realization of a toneless mora, since this would

[17] Haudricourt (1968) was the first to establish a regular correspondence between H tones in Paicî and Cèmuhî, aspirated stops and voiceless sonorants in other Northern New-Caledonian languages, and reduplicative forms in other Oceanic languages. He hypothesized that reduplicated forms changed to word-initial geminates (*$C_1V_aC_1V_a$ > *$C_1C_1V_a$), which were the direct origin of both the aspirated stops (*$C_1C_1V_a$ > *$C_1^hV_a$) and the H tones (*$C_1C_1V_a$ > *$C_1\acute{V}_1$). Rivierre (1993, 2001) demonstrates that the geminates had already changed into aspirated stops and voiceless sonorants in Proto-New-Caledonian, and that the H tones of Paicî and Cèmuhî are the result of the transphonologization of the aspiration contrast.

[18] Although aspirated consonants are also known to have a depressor effect on f_0 in some languages (cf. Michaud & Sands 2020 for a recent overview).

not distinghuish it from all-H [pwa̱a̱gó] 'banana *sp.*', underlyingly /pwáa̱go/), and downstepped L-toned enclitics, as we saw in section 2.4 above (cf. examples (14) and (15)).[19]

Evidence for this tonogenesis scenario comes from regular correspondences between H-toned TBUs in Paicî and syllables starting with an aspirated consonant in other languages of Northern New Caledonia which have maintained the aspiration contrast (cf. (Ozanne-Rivierre 1995)). This is briefly illustrated in Table 1 with regular correspondences between Paicî and Nemi.[20]

Table 1: Segmental ∼ tonal correspondences between Nemi and Paicî

Nemi C^h/N̥ ∼	Paicî H		Nemi C/N ∼	Paicî L	
t^hi-	tíí	'to strip bark'	tii	tìì	'letter, book'
hi-(n) (<*c^hi-)	í̱	'(his) hand'	cin	ì̱	'breadfruit'
hwa-(n) (<*p^hwa-)	pwá̱	'(his) mouth'	pwe-(n)	pwà̱	'(his) fruit'
m̥eek	méé̱é̱	'*Acacia spirorbis*'	maa-	mè̱-	'tip'
n̥it	ní̱	'blow (nose)'	nuup	nù̱	'to light (fire)'
w̥e-	wá-	'(be) like'	we	wè	'water'

4.2 From accent to tone: tonogenesis in an accent system

Building on Rivierre's (1978) briefly sketched hypothesis, I contend that the phonological downstep of Paicî derives from a former accent system very similar (if not identical) to that of Xârâcùù. Pre-Paicî (i.e., Paicî prior to tonogenesis) had (i) the same aspiration contrast as the other Northern New Caledonian languages, and (ii) a downstep-based accent system similar to present-day Xârâcùù, with the same metrical conditioning involving foot and colon structure (in the analysis I give above). The tonogenesis process described above took place in this accentual system, "removing", so to speak, the innovated H-toned lexical items from the accent system – which explains the *H/↓ constraint and the deletion of downstep in H-toned words in present-day Paicî. At this stage, accent was only marked on the prosodically non-innovative, Ø-toned lexical items, thus losing its accentual status by no longer satisfying the crucial obligatoriness criterion. The tonemicization of the L tone (either simultaneously or at a later stage) then definitively entrenched the reanalysis of downstep as a phonological object conditioned by the L tone, i.e. as an (non-accentual) element of the tone system. This scenario is schematized in Figure 1.

This diachronic path explains many of the quirky properties of both downstep and L in Paicî:

(i) the accentual properties of downstep, discussed in (2.5);

(ii) its semi-autonomy from lexical tone (H vs. L), and its incompatibility with H tones;

[19] Whether isotonic L-toned lexical items are to be analyzed as underlyingly toneless (with postlexical default L insertion) or as underlyingly specified as L (through generalization from the non-isotonic words and downstepped L-toned enclitics) is unclear, and mostly a matter of analytical preference. It is also unclear whether step (23)b necessarily preceded step (23)c, or whether both occurred at the same time.

[20] Cf. Rivierre (1975) and Haudricourt & Ozanne-Rivierre (1982) for more detail on the phonology of Nemi, and Rivierre (1993, 2001) for further tonal comparative data. The Proto-North-New-Caledonian reconstructions in Table 1 are from Ozanne-Rivierre (1995).

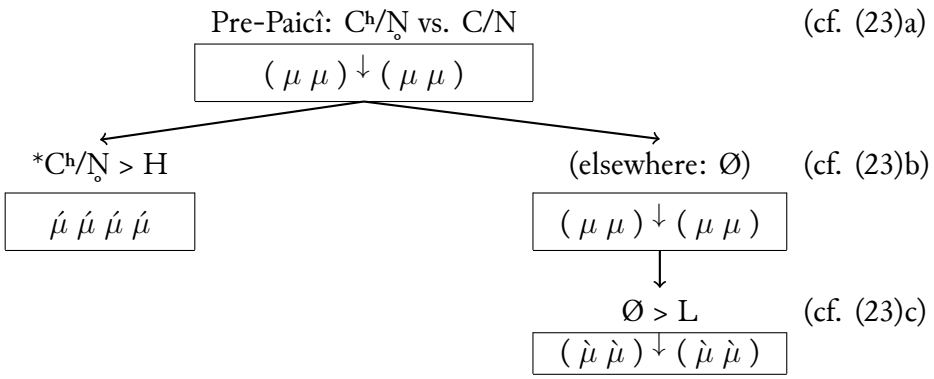

Figure 1: From accent to tone through "accidental" tonogenesis in Paicî

(iii) the relative weakness of the contrastive status of L: only the rare non-isotonic lexical items and the eight downstepped L-toned enclitics justify positing an underlying L.

A phenomenon similar to the Xârâcùù "coupling" might also have been present in Pre-Paicî, and might be the origin of the underlying downstep present in the 19 downstepped enclitics described in section 2.4. Indeed, as already briefly suggested by Rivierre (1978: 430) himself, these enclitics correspond to grammatical words that are typically recessive in Xârâcùù, i.e. are realized either lower than or at the same pitch as the end of the preceding dominant word (depending on how long the dominant word is), which is exactly the realization of downstepped toneless enclitics. This parallel is clearly illustrated in (24) with the punctual markers /+maa̲/ in Xârâcùù and /=↓mwàà̲ᴴ/ ∼ /=↓màà̲ᴴ/ in Paicî, which are likely cognates.[21]

(24) a. Xârâcùù: /ɛ + maa̲/ → {ɛ ↓maa̲} (Rivierre 1978: 430)
b. Paicî: /è =↓mwàà̲ᴴ/ → è =↓mwàà̲ (191121-12-AG1:52)
(s)he PCT

As can be seen, the subject pronoun + punctual marker sequences in both languages are prosodically identical, with the same downstep affecting the aspectual marker. More research is needed to determine why only a subset of tonal enclitics follow this pattern in Paicî, and what diachronic process explains the difference between downstepped toneless and downstepped L-toned enclitics.

Note that this specific example could also explain the juncture H tone found after the punctual marker /=↓m(w)àà̲ᴴ/ in Paicî, which is otherwise inexplicable, and left unexplained by Rivierre (1974, 1978). Indeed, the juncture H tone, which in general marks a dependency relation in Paicî, is only assigned by prosodically independent monomoraic morphemes.[22] The Paicî

[21]Rivierre (1978: 430) illustrates this with the same Xârâcùù marker /+maa̲/ (which he transcribes *maa* with oral vowels and analyzes as an imperfective marker (*inaccompli*)), and the Paicî imperfective marker /=↓bwaa/, which he seems to suggest is cognate with Xârâcùù *maa* (Xârâcùù /mV/ is in regular correspondence with Paicî /bV/, cf. Ozanne-Rivierre & Rivierre 1989). Claire Moyse-Faurie transcribes the Xârâcùù marker with nasal vowels (*mââ* /maa̲/) and analyzes it as a punctual marker (although she does not use this term, the translations she provides justify its use here, cf. Moyse-Faurie (1995), Moyse-Faurie & Néchérö-Jorédié (1989)). On the basis of Moyse-Faurie's translation and phonological transcription, it appears that the Paicî cognate of Xârâcùù /+maa/ is actually the punctual marker /=↓m(w)àà̲ᴴ/ (as per the regular correspondence betwen Xârâcùù /mṼ/ and Paicî /mṼ/, established by Ozanne-Rivierre & Rivierre 1989).

[22]The importance of the monomoraicity of the H-assigning head is demonstrated by the fact that transitive

marker /=$^{\downarrow}$m(w)a̱a̱^{H}/ is exceptional on two accounts: it is both prosodically weak (it is a tonal enclitic) and bimoraic. Interestingly, its cognate in Xârâcùù, /+ma̱a̱/, not only is recessive (i.e. forms a register span with the preceding subject) but does not prosodically incorporate the following word, i.e. it is always the last element in its register span. The register is thus always reset after /+ma̱a̱/, which produces exactly the same prosodic profile as that of Paicî /=$^{\downarrow}$m(w)a̱a̱^{H}/, as shown in (25).

(25) a. Xârâcùù: /dui + ma̱a̱ kuka/
{du^{5}i^{5} $^{\downarrow}$ma̱a̱^{1}} ⇑ {ku^{5}$^{\downarrow}$ka^{1}}
Dui PCT cook
'Dui cooks for the first time.' (RT1: 16'08")

b. Paicî: /rʌ =$^{\downarrow}$ma̱a̱^{H} wa̱dò.../
[rʌ^{5} =$^{\downarrow}$ma̱a̱^{1} wá̱^{5}dò^{1}...]
they PCT drink
'(Then) they drink [coffee].' (171228-02-HN1:61)

5 Conclusion

The Paicî prosodic system seems to consist of two distinguishable but intertwined subsystems: a purely tonal subsystem contrasting two tonemes H and L, and a downstep with conspicuous accentual properties and whose behavior is tied to tone despite being semi-independent from it.

Elaborating on a preliminary hypothesis first put forth by Rivierre (1978), I have shown that a comparison with neighboring Xârâcùù, a non-tonal, accentual language which shares many quirky properties with the Paicî downstep, explains all the exceptional characteristics of the Paicî system, thereby illuminating its double origin. Before being a tonal language, Paicî had an accent system very similar if not identical to that of Xârâcùù, where accent was marked by a metrically conditioned downstep. The language then independently developed a tonal contrast through garden-variety tonogenesis. As a result, the former accent system was integrated into the innovated tone system, leaving downstep with many of its accentual properties.

Paicî is thus interesting for the study of the synchronic and diachronic relation between accent and tone, the two prototypical word-prosodic systems defined by Hyman (2006). In synchrony, it shows not only that languages may 'freely "pick and choose" between the prototypical properties of ...accent systems vs. tone systems' (Hyman 2006: 226), but also that different aspects within one single word-prosodic system may be characterized differently with respect to these two prototypes.

From a diachronic perspective, the Paicî prosodic system shows that tonal reanalysis of accentual phenomena, as is attested in a few languages (e.g., Scandinavian, cf. Riad 1998; Kingston 2011, a.o.), is not the only way in which tonal contrasts may appear in an accentual language. Independent tonogenesis is another option. In the particular case of Paicî, this results in the loss of the former accent system (although not of all its properties) and its gradual integration into the tone system. It remains to be seen what alternative outcomes can result from the same change in other languages, for which more research on prosody-independent tonogenesis in accentual languages is needed.

verbs, which assign a juncture H tone to their incorporated object, are systematically reduced to their initial mora under object incorporation.

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Abbreviations

Abbreviations follow the Leipzig Glossing Rules, except PCT punctual.

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Résumé

Que se passe-t-il lorsqu'une langue accentuelle développe un contraste tonal à partir de traits laryngaux : le système accentuel est-il conservé parallèlement au nouveau contraste tonal ? Est-il perdu ? Les deux systèmes prosodiques fusionnent-ils ? Cet article présente le système tonal du paicî, qui illustre le dernier scenario. Le paicî semble posséder deux sous-systèmes prosodiques intégrés : un contraste haut/bas purement tonal, et un downstep (faille prosodique) aux propriétés accentuelles uniques au monde. Prenant pour poind de départ le travail séminal de Rivierre (1978), ce papier montre qu'une comparaison avec la langue voisine xârâcùù, où l'accent est marqué par une faille similaire, explique ce système apparemment mixte : le contraste tonal haut/bas du paicî est le résultat d'un processus de tonogenèse qui s'est produit dans une langue déjà accentuelle, où l'accent était marqué par une faille prosodique comme en xârâcùù. Cette tonogénèse a conduit à une réinterprétation de la faille prosodique comme tonale et non plus accentuelle. Le cas du paicî est intéressant pour l'étude des interactions entre accent et ton, à la fois en synchronie et en diachronie.

Zusammenfassung

Was passiert, wenn eine Akzentsprache kontrastiven Ton aufgrund laryngaler Merkmale entwickelt: Bleibt das Akzentsystem neben dem neuen Tonkontrast erhalten? Geht es verloren? Verschmelzen beide prosodischen Systeme? In diesem Artikel stelle ich das Tonsystem von Paicî vor, welches das Verschmelzen von Akzent- und Tonsystem veranschaulicht. Paicî hat zwei integrierte prosodische Subsysteme: einen rein tonalen H-/L-Kontrast und einen typologisch ungewöhnlichen Downstep mit Akzent-Eigenschaften. Aufbauend auf Rivierre (1978) zeige ich, dass ein Vergleich mit dem benachbarten Xârâcùù, wo der Akzent durch einen ähnlichen Downstep gekennzeichnet ist, dieses scheinbar gemischte System erklärt: Der H-/L-Tonkontrast entstand durch Tonogenese in einer bereits akzentuierten Sprache, wo der Akzent wie in Xârâcùù durch einen Downstep gekennzeichnet war. Dies führte dazu, dass der frühere Downstep als tonal neu interpretiert wurde. Das System im Paicî ist interessant für die Untersuchung der Wechselwirkungen zwischen Akzent und Ton, sowohl synchron als auch diachron.

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