Taiwanese Cantillation Prosody
and the Standard Tradition of Regulated Verse

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Basic issue

Tradition that Southern dialects are better for representing the sound of traditional poetry of the "Táng sound" (*tángyīn* 唐音) style.

Known problems with the claim

Taking the common Taiwanese *wéndú* 文讀 as an example, there are some sixteen initials heard, whereas medieval phonology requires no fewer than 35 and as many as 41. Taiwanese does not always distinguish distinct initials.

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Taking the common Taiwanese *wéndú* 文讀 as an example, there are some sixteen initials heard, whereas medieval phonology requires no fewer than 35 and as many as 41. Taiwanese does not always distinguish distinct initials.

There are also various places where medieval categories are simply mixed up in Taiwanese — one medieval initial coming out different ways in Taiwanese — mostly among voiced initials.

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Initial	字	Medieval phonology	Taiwanese
並母	湓	{ben-1}	phûn
	抱	{bauQ-1}	phāu
	浮	{bou-3b}	hû
	服	{buk-3b}	ho̍k
	被	{biQ-3bx}	pī
	病	{beingH-3a}	pēng

Taiwanese *wéndú* fails to represent a medieval initial in a single form:

Initial	字	Medieval phonology	Taiwanese
明母	每	{meiQ-1a}	muí^n
	買	{meiQ-2a}	mái^n
	蟆	{ma-2}	mâ^n
	馬	{maQ-2}	má^n
	眉	{mi-3cx}	bî
	未	{miH-3a}	bī
	無	{muo-3c}	bû
	暮	{muoH-1}	bŏ̄

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Initial	字	Medieval phonology	Taiwanese
定母	笛	{deik-4}	te̍k
	弟	{deiQ-4}	tē
	停	{deing-4}	thêng
	頭	{dou-1}	thiû
	茶	{dra-2}	chhâ
	宅	{dreik-2a}	the̍k
	纏	{dran-3b}	tiân
	沉	{drem-3}	tîm

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Initial	字	Medieval phonology	Taiwanese
來母	羅	{le-1}	lô
	老	{lauQ-1}	nɔ́^{n}
日母	人	{nyen-3b}	lîn
	耳	{nyiQ-3d}	ní^n

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In any case, this is a static view of both phonologies. Since we are really talking about performance issues, we should try to use more dynamic evidence.

I want to report instead on the prosodic behavior observed in Taiwanese "cantillation" of Táng-era literature. This is long-term work in progress — I put it aside in the Fall of 2001, frustrated with technical problems, but have taken it up again this summer, now that my programming skills can be put to service here.

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- Chinese traditional *yínsòng* 吟誦 is highly ornamented.
- Intrinsic syllable-tones are elaborated into melody; the principle bears a likeness to the embellishment of written characters into *shūfǎ* 書法.

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The "Pípá xíng" 琵琶行 of Bái Jūyì.

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Sung by Hsü I-tʻing 許禕姃 to a setting transmitted by Hóng Zénán 洪澤南.

潯陽江頭夜送客

sîm-iông-kang-thiû iā-sòng-khek

Seeing off a guest by night
    at Sîmiông River's edge —

楓葉荻花秋瑟瑟

hong-iȧp tėk-hoa chhiu sek-sek

'Seksek' in the autumn air
    went sweetgum leaves,
    went silver-grass blossoms —

hong - iȧp___ tėk hoa___ chhiu sek - sek___
楓　　　葉　　荻　花　　　秋　瑟　　瑟

主人下馬客在船

chú-lîn hā-máⁿ khek chāi-sôan

The host dismounted;
    at boatside was the guest —

舉酒欲飲無管弦

kú-chiú io̍k-ím bû-kóan-hiân

They raised their wine to drink;
    no flutes or strings there were —

kú - chiú_____ io̍k ím bû - kóan - hiân
舉 酒 欲 飲 無 管 弦

醉不成歡慘將別

chuì put-sêng-hoan chhám chiong-piȧt

Drunk, but not to the point of happiness —
    miserable at parting —

chuì   put - sêng - hoan   chhám chiong - piȧt
醉   不   成   歡   慘   將   別

別時茫茫江浸月

piȧt-sî bông-bông kang chìm-gȯat

Vast it seemed, at parting —
　　river drenched moon —

piȧt - sî　　bông - bông＿＿＿＿　　kang chìm - gȯat＿
別　　時　　茫　　茫　　　　　　江　浸　　月

忽聞水上琵琶聲

hut-bûn suí-siōng pî-pâ-seng

Suddenly was heard
    the sound of a lute on the waters —

25

hut - bûn　　　　suí - siōng　pî - pâ - seng
忽　　聞　　　　水　上　琵　琶　聲

主人忘歸客不發

chú-lîn bông-kui khek put-hoat

The host forgot about going back;
   the guest did not set off —

Segmentals

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What about rhyming?

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絕	chȯat	jué
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Just as in Mandarin. (In fact Mandarin does better on *jué/xiē*.)

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家在蝦蟆陵下住   chū   秋月春風等閒度   tū

十三學得琵琶成 sêng   弟走從軍阿姨死 sú

名屬教坊第一部   pū   暮去朝來顏色故   kù

曲罷曾教善才服 ho̍k   門前冷落車馬稀 hi

妝成每被秋娘妒   tù   老大嫁作商人婦   hū

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*數 sò͘ => sù　　　　**度 tō͘ => tū**　　　　**故 kò͘ => kù**

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When did people start doing that?

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Bái himself rhymes two *shǎngshēng* words into a *qùshēng* rhyming block — both are examples of words that have moved between tone categories as a result of the tone split that gave us -ù and -ū.

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This shows us that the tone-split we see in Taiwanese was already present in Bái's language — like modern poets, he rhymed in an accent whose tones were different from the way he spoke.

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The point is that imperfect tonal behavior, of the same kind that we can observe today in Taiwanese (and Mandarin), was part of Táng tradition, at least by Bái's time. The *yīn-yáng* tone split was in existence by then. Bái must have had to accommodate it, just as Taiwanese cantillators do.

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Syllables in different tones are also not the same duration.

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○	1.3
●	1.0

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○	1.3
yīnpíng	1.2
yángpíng	1.3
●	1.0
yīnshǎng	1.0
yīnqù	1.0
yángqù	1.0
yángrù	1.0
yīnrù	1.0

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yīnshǎng	1.0
yīnqù	1.0
yángqù	1.0
yángrù	1.0
yīnrù	1.0

Distinct tendency to prolong *píng* syllables overall, and particularly the *yángpíng*.

Average duration by tone (♩ = 1.0)

tone	avg. duration
○	1.3
yīnpíng	**1.2**
yángpíng	**1.3**
●	1.0
yīnshǎng	1.0
yīnqù	1.0
yángqù	1.0
yángrù	1.0
yīnrù	1.0

Distinct tendency to prolong *píng* syllables overall, and particularly the *yángpíng*.

How does that relate to the relative length of different positions?

Average duration by place and tone (♩ = 1.0)

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place:	1	2	3	4	5	6	7
○	1.0	1.7	1.0	1.4	1.0	1.0	1.8
●	1.0	0.9	0.9	0.8	0.9	0.8	1.6

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Final syllable, regardless of tone, tends to be prolonged.

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Caesura-positions 2 & 4 are longer in *píng* tones.
Inner (positions 2-6) *zè* tones are all slightly shorter on average.

Average duration by place and tone ($\downarrow$ = 1.0)

place:	1	2	3	4	5	6	7
○	1.0	1.7	1.0	1.4	1.0	1.0	1.8
yīnpíng	1.0	1.6	1.0	1.2	1.0	1.1	1.9
yángpíng	1.1	1.7	1.0	1.6	1.0	0.9	1.8
●	1.0	0.9	0.9	0.8	0.9	0.8	1.6
yīnshǎng	1.0	1.3	0.9	0.8	1.0	0.9	1.5
yīnqù	1.0	0.6	0.9	0.6	0.9	0.9	1.6
yángqù	1.0	0.8	0.8	0.8	1.1	0.8	1.8
yīnrù	1.0	0.6	0.8	0.8	0.8	0.8	1.7
yángrù	1.2	0.8	0.9	0.8	0.8	0.7	1.5

Average duration by place and tone (♩ = 1.0)

place:	1	2	3	4	5	6	7
○	1.0	**1.7**	1.0	**1.4**	1.0	1.0	**1.8**
yīnpíng	1.0	**1.6**	1.0	**1.2**	1.0	1.1	**1.9**
yángpíng	1.1	**1.7**	1.0	**1.6**	1.0	0.9	**1.8**
●	1.0	0.9	0.9	0.8	0.9	0.8	**1.6**
yīnshǎng	1.0	1.3	0.9	0.8	1.0	0.9	**1.5**
yīnqù	1.0	0.6	0.9	0.6	0.9	0.9	**1.6**
yángqù	1.0	0.8	0.8	0.8	1.1	0.8	**1.8**
yīnrù	1.0	0.6	0.8	0.8	0.8	0.8	**1.7**
yángrù	1.2	0.8	0.9	0.8	0.8	0.7	**1.5**

Average duration by place and tone (♩ = 1.0)

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○	1.0	**1.7**	1.0	**1.4**	1.0	1.0	**1.8**
yīnpíng	1.0	**1.6**	1.0	**1.2**	1.0	1.1	**1.9**
yángpíng	1.1	**1.7**	1.0	**1.6**	1.0	0.9	**1.8**
●	1.0	0.9	0.9	0.8	0.9	0.8	**1.6**
yīnshǎng	1.0	1.3	0.9	0.8	1.0	0.9	**1.5**
yīnqù	1.0	0.6	0.9	0.6	0.9	0.9	**1.6**
yángqù	1.0	0.8	0.8	0.8	1.1	0.8	**1.8**
yīnrù	1.0	0.6	0.8	0.8	0.8	0.8	**1.7**
yángrù	1.2	0.8	0.9	0.8	0.8	0.7	**1.5**

These generalizations hold for most individual tones

Average duration by place and tone (♩ = 1.0)

place:	1	2	3	4	5	6	7
○	1.0	1.7	1.0	1.4	1.0	1.0	1.8
yīnpíng	1.0	1.6	1.0	**1.2**	1.0	1.1	1.9
yángpíng	1.1	1.7	1.0	1.6	1.0	0.9	1.8
●	1.0	0.9	0.9	0.8	0.9	0.8	1.6
yīnshǎng	1.0	1.3	0.9	0.8	1.0	0.9	1.5
yīnqù	1.0	0.6	0.9	0.6	0.9	0.9	1.6
yángqù	1.0	0.8	0.8	0.8	1.1	0.8	1.8
yīnrù	1.0	0.6	0.8	0.8	0.8	0.8	1.7
yángrù	1.2	0.8	0.9	0.8	0.8	0.7	1.5

These generalizations hold for most individual tones, though position-4 *yīnpíng* looks doubtful here. (More data needed.)

Average duration by place and tone (♩ = 1.0)

place:	1	2	3	4	5	6	7
○	1.0	1.7	1.0	1.4	1.0	1.0	1.8
yīnpíng	1.0	1.6	1.0	1.2	1.0	1.1	1.9
yángpíng	1.1	1.7	1.0	1.6	1.0	0.9	1.8
●	1.0	0.9	0.9	0.8	0.9	0.8	1.6
yīnshǎng	1.0	**1.3**	0.9	0.8	1.0	0.9	1.5
yīnqù	1.0	0.6	0.9	0.6	0.9	0.9	1.6
yángqù	1.0	0.8	0.8	0.8	1.1	0.8	1.8
yīnrù	1.0	0.6	0.8	0.8	0.8	0.8	1.7
yángrù	1.2	0.8	0.9	0.8	0.8	0.7	1.5

Some prolongation in position-2 *yīnshǎng*, too.

Average duration by place and tone (♩ = 1.0)

place:	1	2	3	4	5	6	7
○	1.0	1.7	1.0	1.4	1.0	1.0	1.8
yīnpíng	1.0	1.6	1.0	1.2	1.0	1.1	1.9
yángpíng	1.1	1.7	1.0	1.6	1.0	0.9	1.8
●	1.0	0.9	0.9	0.8	0.9	0.8	1.6
yīnshǎng	1.0	**1.3**	0.9	0.8	1.0	0.9	1.5
yīnqù	1.0	0.6	0.9	0.6	0.9	0.9	1.6
yángqù	1.0	0.8	0.8	0.8	1.1	0.8	1.8
yīnrù	1.0	0.6	0.8	0.8	0.8	0.8	1.7
yángrù	1.2	0.8	0.9	0.8	0.8	0.7	1.5

Some prolongation in position-2 *yīnshǎng*, too.

Are all cases of prolongation basically the same?

Average duration by place and tone (♩ = 1.0)

place:	1	2	3	4	5	6	7
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yīnpíng	1.0	1.6	1.0	1.2	1.0	1.1	1.9
yángpíng	1.1	1.7	1.0	1.6	1.0	0.9	1.8
●	1.0	0.9	0.9	0.8	0.9	0.8	1.6
yīnshǎng	1.0	**1.3**	0.9	0.8	1.0	0.9	1.5
yīnqù	1.0	0.6	0.9	0.6	0.9	0.9	1.6
yángqù	1.0	0.8	0.8	0.8	1.1	0.8	1.8
yīnrù	1.0	0.6	0.8	0.8	0.8	0.8	1.7
yángrù	1.2	0.8	0.9	0.8	0.8	0.7	1.5

Some prolongation in position-2 *yīnshǎng*, too.

Are all cases of prolongation basically the same? (no)

Percentages of melismatic and non-melismatic syllables

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("melisma": more than one note to a syllable)

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tone	melismatic		non-melismatic
	fall	rise	
yīnpíng	26.4	1.4	
yángpíng	5.1	52.6	
yīnshǎng	44.7	6.6	
yīnqù	30.4	0.0	
yángqù	25.8	0.0	
yīnrù	43.8	1.4	
yángrù	27.5	0.0	

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Yángpíng has strongest tendency to melisma.

Branner, "Taiwanese Cantillation Prosody" p. 108

Percentages of melismatic and non-melismatic syllables

("melisma": more than one note to a syllable)

tone	melismatic		non-melismatic
	fall	rise	
yīnpíng	26.4	1.4	72.2
yángpíng	5.1	**52.6**	42.3
yīnshǎng	44.7	6.6	48.7
yīnqù	30.4	0.0	69.6
yángqù	25.8	0.0	74.2
yīnrù	43.8	1.4	54.8
yángrù	27.5	0.0	72.5

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yīnqù	**30.4**	0.0	69.6
yángqù	**25.8**	0.0	74.2
yīnrù	**43.8**	1.4	54.8
yángrù	**27.5**	0.0	72.5

Yángpíng has strongest tendency to melisma.

Other tones, if melismatic, normally fall; *yángpíng* rises.

Percentages of melismatic and non-melismatic syllables
("melisma": more than one note to a syllable)

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Are *yīnshǎng* and *yīnrù* melisma significant? (More data needed.)

Branner, "Taiwanese Cantillation Prosody" p. 112

Conclusions

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- Even in a non-regulated poem, the *píng-zè* distinction is expressed as a length-distinction — especially at the caesura but also in general.
- *Yángpíng* tends to be melismatic and has a distinctive rising contour, unlike the other tones, which tend to fall in melisma.
- Other matters, requiring further data and historicity unknown:
  - Line-feet tend to be quite prolonged, regardless of tone.
  - Initial syllable is not shortened in *zè*-tones.
  - *Shǎngshēng* in position 2 appears somewhat prolonged.

Workflow

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- Export to "extensible markup language for music" format (MusicXML).
- Analyze with scripting language (Python 3).

End