Transcultural Music History: 291–312

15. Towards a comparative history of tonal text-setting practices in South East Asia[1]

James Kirby

Introduction: 'How can they sing in a tone language?'

A *tone language* is a language in which differences in pitch are used to distinguish lexical or grammatical meaning. While most modern Western European languages do not make use of pitch in this way, by some estimates up to 70% of the world's languages may be tonal, including many of the world's most widely spoken languages such as Mandarin Chinese, Punjabi and Yoruba.[2]

In most tone languages of East and South East Asia, every syllable has a characteristic pitch associated with it that is as much a part of the word's pronunciation as are its consonants and vowels. Changing the relative pitch at which a syllable is spoken will thus induce a change in meaning. For instance, in a language like Thai, the syllable *klai* spoken with a high-falling pitch means 'near', but when spoken with a neutral, level pitch means 'far'. Given such a naïve (and even a not-so-naïve) understanding of tone languages, a common question that often arises is about the potential conflict between *linguistic* and *musical* uses of pitch. How is the linguistic message not obliterated when texts are set to melodies?

In this chapter, I present the beginnings of a systematic investigation into the extent to which different tone languages, and different genres, adhere to principles of alignment between tone and melody.[3] Particular emphasis is placed on attempting to determine the degree to which adherence to principles of *text-setting*, which govern how a composer may assign notes to words, are a function of a particular linguistic (as opposed to musical) tradition. The question is not simply if there are different text-setting principles active in different lan-

1 This work is part of a larger project on text-setting constraints in tone languages, involving collaborations with Prof. D. Robert Ladd (University of Edinburgh) and Dr James Mitchell (Monash University). I remain solely responsible for any errors of fact or interpretation. Many thanks to Wirote Aroonmanakun of Chulalongkorn University for providing the computational tools to automate the grapheme-to-phoneme conversion of Thai script. This project has been made possible in part by the Arts and Humanities Research Council grant AH/M005240/1 'Singing in tone: Text-setting constraints in Southeast Asia'.

2 Moira Yip, *Tone* (Cambridge: Cambridge University Press, 2002).

3 To avoid confusion, in this chapter I will use the terms *melody* and *melodic* to refer exclusively to musical aspects of pitch realisation, and reserve *tone* and *tonal* to refer exclusively to the linguistic uses of pitch.

guages, which much previous research has shown to be the case. Rather, I seek to determine if there is evidence that principles active in a given language persist across time and genre.

In this chapter, I focus exclusively on the musical forms of Thailand and Vietnam. Tonal text-setting is by no means unique to these languages,[4] but they provide a convenient pair on which to base an initial comparison, as they are spoken in regions with very different linguistic, cultural and colonial histories. I will argue that, in spite of the pre-eminence of Westernised musical forms in the popular genres of both Thailand and Vietnam, at least one aspect of their so-called 'classical' or 'traditional' vocal traditions – their text-setting principles – are still present in these relatively acculturated song forms. The comparative study of text-setting thus provides a potentially useful means of tracing the evolution of a cultural artefact in apparent time.

Text-setting

Song is found in every known culture, including those that speak tone languages, so clearly there must be a way that artists and composers meet the challenge of reconciling tone and tune. There are at least three important components to understanding how they do so.[5] First, a great deal of information can be gleaned from sentential context: in many cases, the other words in the lyric, knowledge of probable subject material or other kinds of structural linguistic knowledge will assist the listener in decoding the singer's intended message. The sequence *Come on in, the water's...* could in theory be completed by any one of thousands of adjectives, but experience suggests that *fine, warm* or possibly *wet* are much more probable than *turbid, dispensed* or *yellow*. Another important component of the answer is *residual phonetic cues*, that is, other phonetic effects, such as length or quality, that might serve to signal the identity of tones or words; we know that such residual cues are active in the perception of whispering in tone languages, for example.[6] Here, I am going to focus on a third component, that of *text-setting constraints*: the principles which govern how a composer may assign notes to words.

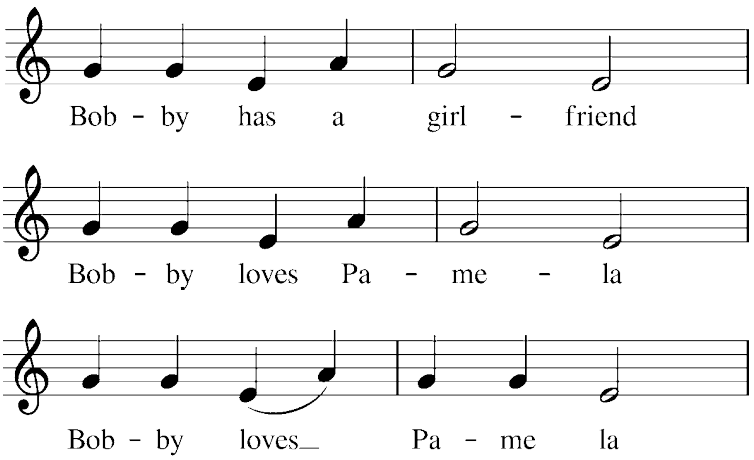
In Western music, text-setting is constrained by both linguistic as well as musical intuitions. Consider the tune in Music example 15.1, an example of the genre we might call 'school playground taunt'. Those of us with a command of this genre would agree that the setting in Music example 15.1(a) constitutes a 'well-set text'. What happens if we try to set

4 See Murray Schellenberg, 'Does language determine music in tone languages?', *Ethnomusicology* 56 (2012), pp. 266–278; D. Robert Ladd and James Kirby, 'Tone-melody matching in tone language singing, in Carlos Gussenhoven and Aoju Chen (eds), *The Oxford Handbook of Language Prosody* (Oxford: Oxford University Press, 2020); and, for more typologically comprehensive reviews, the papers in Jürgen Schöpf (ed.), *Jahrbuch des Phonogrammarchivs der Österreichischen Akademie der Wissenschaften 4* (Vienna: Österreichische Akademie der Wissenschaften, 2014).

5 D. Robert Ladd, 'Singing in tone languages: An introduction to the kinds of things we might expect to find', in Schöpf, *Jahrbuch des Phonogrammarchivs*, pp. 13–28.

6 Siyun Liu and Arthur G. Samuel, 'Perception of Mandarin lexical tones when F0 information is neutralized', *Language and Speech* 47 (2004), pp. 109–138.

a different text to this same tune?[7] If we simply assign syllables to notes left to right, as in Music example 15.1(b), the result is perceived to be significantly less acceptable, or at least not as pleasing to the ear as the introduction of a melisma on *loves*, as shown in Music example 15.1(c).



Music example 15.1: Three examples of 'stress-beat' text-setting. In (a), a strictly syllabic setting, in which syllables are assigned to successive notes from left to right, results in a well-set text. In (b), application of the same algorithm results in a poorly-set text, due to violation of a constraint which disprefers the association of stressed syllables and weak metrical positions. A melismatic realisation, as in (c), avoids violation of this constraint, giving the optimal setting for this text.

While text-setting has occupied poets and composers (and, summarily, metricists and musicologists) for centuries, an influential paper by Halle and Lerdahl sparked renewed linguistic interest in the topic.[8] These authors approached the problem from a generative perspective, posing the question as: how do we explain that when singers encounter a new verse of a familiar song, they share consistent intuitions about how the syllables of the text should be aligned with the tune? Subsequent work on metrics has revealed powerful grammatical principles that underlie the acceptability of texts when sung or chanted in a diverse range of lan-

7 Narrowly construed, the term *text-setting* refers specifically to the case where music is composed to a pre-existing text, but analogous issues arise when lyrics are composed for pre-existing music (see Jonathan King, *The New Grove Dictionary of Music and Musicians,* https://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000051057, Access 28 November 2019). In this chapter, I will use the term somewhat ambiguously to refer to both processes.

8 John Halle and Fred Lerdahl, 'A generative textsetting model', *Current Musicology* 55 (1993), pp. 3–23.

guages and genres, including English folk verse,[9] traditional French song,[10] Greek prosody[11] and Sanskrit epics.[12] It is clear from this work that although a general correspondence exists between linguistic and musical or poetic constituents, the precise nature of this correspondence varies with language and genre. For instance, although there is a preference for prominent linguistic and musical constituents to match in both English sea shanties and French folk songs, this pressure appears to be greater in English, where it is rigorously enforced in all positions, as opposed to French, where parallelism is found consistently at line ends only.[13]

Halle and Lerdahl claimed that 'the relationship of musical and phonological pitch contour is highly constrained in settings of tone languages such as Chinese',[14] and they refer specifically to the important work of Bell Yung on tonal text-setting in Cantonese opera arias.[15] Yung argues that the mapping between speech tone and musical melody in that genre is often exact, a phenomenon he terms 'absolute matching'.[16] This accords with the intuition of some musicians that the melody of a song in a tone language is determined by the linguistic tones of a given text.[17] However, much as Dell and Halle demonstrated in 2009 for English and French, subsequent work on tonal text-setting in a range of languages suggests that this constraint is not a universal. For instance, the mapping between tone and tune in Cantonese is not always as strict as in pop music as it is in opera,[18] and in some types of Mandarin Chinese vocal music, tone–tune correspondence may not be enforced at all.[19] Moreover, several

9 Bruce Hayes and Margaret MacEachern, 'Quatrain form in English folk verse', *Language* 74(3) (1998), pp. 473–507.

10 François Dell and John Halle, 'Comparing musical textsetting in French and in English songs', in Jean-Louis Aroui and Andy Arleo (eds), *Towards a Typology of Poetic Forms: From Language to Metrics and Beyond* (Amsterdam: John Benjamins, 2009), pp. 63–78.

11 Andrew M. Devine and Laurence D. Stephens, *The Prosody of Greek Speech* (New York/Oxford: Oxford University Press, 1994).

12 Kevin M. Ryan, 'Onsets contribute to syllable weight: Statistical evidence from stress and meter', *Language* 90 (2014), pp. 309–341.

13 Dell and Halle, 'Comparing musical textsetting', p. 71.

14 Halle and Lerdahl, 'A generative textsetting model', p. 4.

15 Bell Yung, 'Creative process in Cantonese opera I: The role of linguistic tones', *Ethnomusicology* 27(1) (1983), pp. 29–47; Bell Yung, 'The relationship of text and tune in Chinese opera', in Johan Sundberg et al. (eds), *Music, Language, Speech and Brain, Proceedings of an International Symposium Series at the Wenner-Gren Center, Stockholm, 5–8 September 1990* (London: Macmillan Press, 1991), pp. 408–418.

16 See, however, Jonathan P. J. Stock, 'A reassessment of the relationship between text, speech tone, melody, and aria structure in Beijing opera', *Journal of Musicological Research*, 18 (1999), pp. 183–206.

17 Trần Văn Khê, 'Vietnamese music', *Selected Reports in Ethnomusicology* 2 (1975), pp. 35–48.

18 Marjorie K. M. Chan, 'Tone and melody in Cantonese', in *Proceedings of the Thirteenth Annual Meeting of the Berkeley Linguistics Society* (Berkeley, CA: Berkeley Linguistics Society, 1987), pp. 26–37.

19 Marjorie K. M. Chan, 'Tone and melody interaction in Cantonese and Mandarin songs', *UCLA Working Papers in Phonetics* 68 (1987), pp. 132–169; Yuen Ren Chao, 'Tone, intonation, singsong, chanting, recitative, tonal composition, and atonal composition in Chinese', in Morris Halle *et al.* (eds), *For Roman Jakobson: Essays on the Occasion of His Sixtieth Birthday* (The Hague: Mouton, 1956), pp. 52–59; Wing See Vincie Ho, 'The tone–melody interface of popular songs written in tone languages', in Mario Baroni *et al.* (eds), *Proceedings of the 9th International*

authors have noted that the degree of correspondence may also depend to some extent on genre, with some genres (chants, nursery rhymes) displaying an almost perfect correspondence while others (acculturated music, hymns) seem to allow for more variability.[20] It is therefore informative to consider how text-setting constraints are realised in broadly similar genres across different languages.

Tonal text-setting in classical song (*1.1–1.2.2)*

In many 'classical' music traditions of South East Asia, texts are not set to rigidly fixed melodies; rather, the precise realisation of the melody is to a large extent determined by the text, and in tone languages by the speech-tones of the text.[21] For a given song, there exists a kind of 'skeletal' melody, which is rarely, if ever, explicitly formalised. Yet singers or listeners familiar with a genre's conventions will be able to produce and/or identify instances which will be judged to be exemplars of this form. In such traditions, it is the text which is in some sense primary, insofar as it constrains the possible realisations of the melody. Here, we will briefly consider two exemplars of vocal traditions where the melodic structures are governed by aspects of the tone system: Thai classical singing or *phleng thai doem,*[22] and *chầu văn,* a northern Vietnamese type of ritual music combining music and poetry.

1.1 Thai

1.1.1 Speech tones in Standard Thai

Standard (Bangkok) Thai has five lexical tones in open syllables, combining differences in both pitch height and direction (see Figures 15.1 and 15.2). The terms 'high', 'falling' and so on are pedagogically common and are reasonably descriptive, but note that the modern high tone of Standard Thai is characterised by a final rise, and the falling tone actually sustains a much higher pitch than the so-called high tone.[23] Thus, Figure 15.1 indicates tones in two ways: descriptively (e.g. high, low, falling), and using the two-digit numerical system

Conference on Music Perception and Cognition (ICMPC 2006) (Bologna: University of Bologna, 2006), pp. 1414–1422.

20 Chao, 'Tone, intonation'; George List, 'Speech melody and song melody in Central Thailand', *Ethnomusicology* 5 (1961), pp. 16–32; Mary E. Saurman, 'The agreement of Thai speech tones and melodic pitches', *Notes on Anthropology* 3 (1999), pp. 15–24.

21 I use 'classical' in this context specifically to refer to musics which require a fairly high degree of sophistication (though not necessarily explicit instruction per se) on the part of the audience in order to appreciate and judge the degree to which a musician or singer has tapped into and skillfully or successfully conveyed the emotional core of a piece.

22 There exist a number of transliteration systems for representing Thai in Roman orthography including Nitaya Kanchanawan, 'Romanization, transliteration, and transcription for the globalization of the Thai language, *The Journal of the Royal Institute of Thailand* 31 (2006), pp. 832–841. In this chapter I give Romanised forms following the Royal Thai General System of Transcription in the *Romanization Guide for Thai Script* (Bangkok: The Royal Institute, 1968) but also provide the terms in Thai script for reference.

23 Phanintra Teeranon, 'The change of standard Thai high tone: An acoustic study and a perceptual experiment', *SKASE Journal of Theoretical Linguistics* 4 (2007), pp. 1–17; Kanjana Thepbor-

proposed by Chao frequently employed in linguistic scholarship on Asian languages, which indicates the (relative) start and end pitches of each tone on a five-level scale (1=low end of pitch range, 5=high end).[24] I will use this system when it is necessary to discuss the phonetic realisation of the tones.

Tone		*Example*	*Gloss*
H(igh)	35	ค้า	'to trade, sell'
F(alling)	52	ค่า	'price, cost'
M(id)	33	คา	'to be stuck'
R(ising)	24	ขา	'leg'
L(ow)	21	ข่า	'galangal'

Figure 15.1: The five tones of Standard (Bangkok) Thai produced on the syllable kha.

1.1.2 Phleng thai doem: Thai court song

The term *phleng thai doem*[25] (เพลงไทยเดิม, lit. 'original Thai song') is used to refer to a large repertoire of materials, including instrumental music performed by the *piphat* (ปี่พาทย์), *mahori* (มโหรี) and *khrueang sai* (เครื่องสาย) ensembles as well as vocal genres. The singing style associated with *phleng thai doem* – sometimes referred to as 'Thai classical song' or 'Thai court song' – can be traced to the Rattanakosin period, but is likely to be even older than this.[26] Being a primarily oral tradition, it was not transcribed or written down, and thus – given the scriptist biases of traditional scholarship – it is only relatively recently that formal analyses of its properties have been undertaken.

The vocal melody in Thai classical singing may be deconstructed into two components: a texted portion (where the texts in question may be from classical plays or literature, or newly composed for the piece in question) and textless melismata composed of elements called

iruk, 'Bangkok Thai tones revisited', *Journal of the Southeast Asian Linguistics Society* 3 (2010), pp. 86–105.

24 Yuen Ren Chao, 'A system of "tone-letters"', *Le maître phonétique* 45 (1930), pp. 24–27.

25 My discussion of Thai classical singing is heavily indebted to the work of Yoko Tanese-Ito, 'Word–melody relationship and modal system in Thai court singing', *International Conference on Thai Studies* (Chulalongkorn University, 1984), pp. 215–224; 'The relationship between speech-tones and vocal melody in Thai court song', *Musica Asiatica* 5 (1988), pp. 109–139) and Dusadee Swangviboonpong, *Thai Classical Singing: Its History, Musical Characteristics and Transmission* (Aldershot/Burlington: Routledge, 2004).

26 See Dusadee, *Thai Classical Singing*, chapter 1.

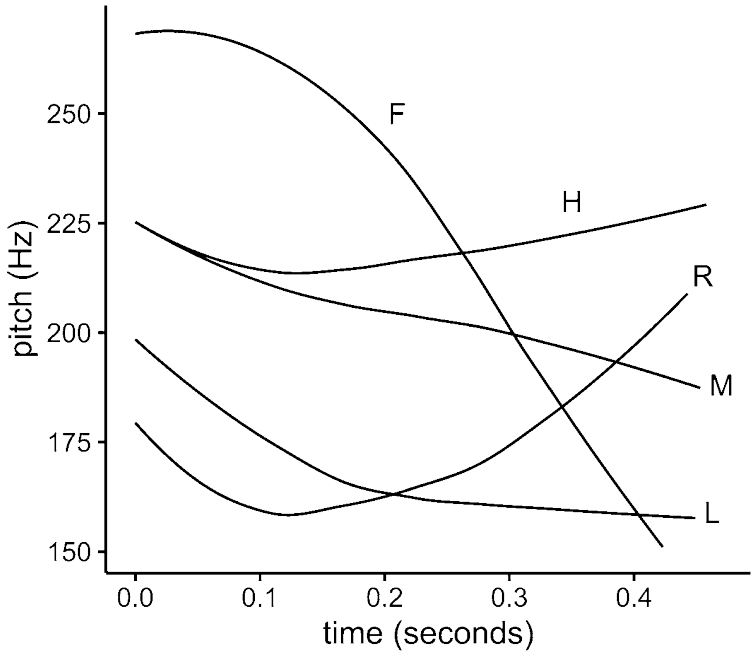


Figure 15.2: Standard Thai tonal contours as spoken in isolation (citation form).

uean (เอื้อน), which, while lacking explicit linguistic content, have immense aesthetic value and a grammar – and semantics – all of their own.[27]

A substantial contribution to the understanding of text–tune relationships in tone languages was made by Yoko Tanese-Ito, who studied the relationship between linguistic tones and musical melodies in Thai court song.[28] Tanese-Ito observed that, within the texted component, there is a *constant relationship* between the linguistic tones of the text and the melodic formulas of the song. Music example 15.2 illustrates this principle by adapting a portion of Tanese-Ito's Example 11.[29] The first line gives the primary pitches for each subdivision which constitute the 'basic' or fundamental identity of the melody. Note that this melody is rarely expressed overtly, but is instead inferred by the analyst. The following three lines show the realisation of this basic melodic figure when sung to three different texts, with the lexical tone of each syllable indicated below its melodic realisation. In this way, the realisation of the tune varies as a function of the speech-tones of the text.[30] It is on the basis of these realisa-

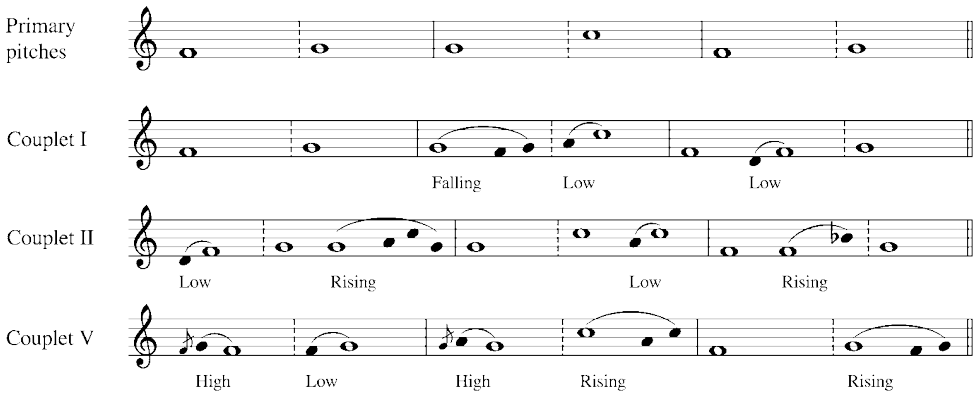
27 See Dusadee, *Thai Classical Singing* for a thorough treatment in English of the different elements in Thai classical singing.

28 See Tanese-Ito, 'The relationship'.

29 Tanese-Ito, 'The relationship', p. 119.

30 *Ibid.*, pp. 118–122.

tions, and a native or trained listener's agreement that they share a fundamental underlying identity, that the 'basic' melody may be inferred.[31]



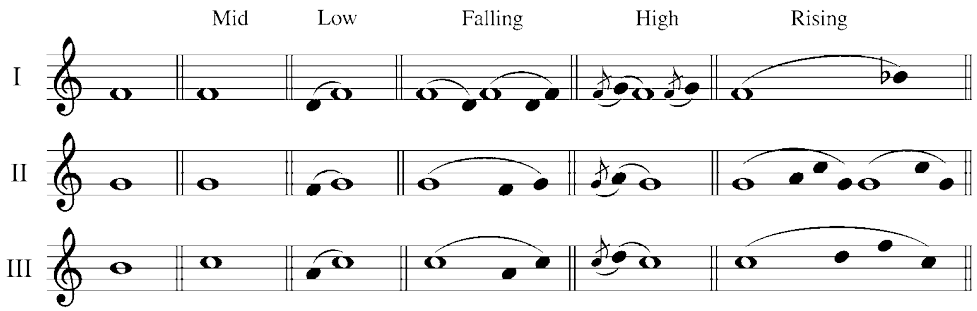
Music example 15.2: The realisation of a Thai court song melody when sung with three different texts. The text below the notes indicates the lexical tone of the word; whole notes, not part of a phrase, left unmarked, are mid tones.[32]

Music example 15.3 shows several examples of the melodic formulas used to realise particular lexical tones when sung relative to a particular primary pitch. Regardless of the primary pitch of the couplet (which can often change throughout a piece through the use of metabole[33]), there is a limited set of melodic sequences which allow for each speech-tone to be identified in sung verse. Note that the actual melodic patterns do not correspond perfectly (or at all) to the pitch movements of the lexical tones as presented in Figure 15.1. This may be because the phonetic realisation of the tones has changed over time, but the archaic forms are preserved in the musical 'dialect'; thus, the tone system used in verse is rather different from the one used in normal speech, a phenomenon also observed in some Chinese classi-

31 This type of 'basic' or 'inner' abstract structural melody is a feature common to many South East Asian classical music traditions: see Gavin Douglas, *Music in Mainland Southeast Asia: Experiencing Music, Expressing Culture* (Oxford: Oxford University Press, 2010); Terry E. Miller and Sam-ang Sam, 'The classical musics of Cambodia and Thailand: A study of distinctions', *Ethnomusicology* 39 (1995), pp. 229–243; Pamela Ann Myers-Moro, 'Thai music and musicians in contemporary Bangkok: An ethnography' (PhD dissertation, University of California Berkeley, 1988); Barley Norton, *Songs for the Spirits: Music and Mediums in Modern Vietnam*, (Urbana: University of Illinois Press, 2009); Marc Perlman, *Unplayed Melodies: Javanese Gamelan and the Genesis of Music Theory* (Oakland: University of California Press, 2004); Francis Silkstone, 'Learning Thai classical music: Memorisation and improvisation (PhD dissertation, SOAS, University of London, 1993); Sumarsam, 'Inner melody in Javanese gamelan music', *Asian Music* 7 (1975), pp. 3–13.

32 Adapted from Tanese-Ito, 'The relationship', p. 119. Reproduced with permission of Cambridge University Press through PLSclear.

33 See David Morton, *The Traditional Music of Thailand* (Los Angeles: University of California Press, 1976) and Tanese-Ito, 'The relationship'.



Music example 15.3: Examples of 'melodic formulas' for Thai court song vocal melodies sung at three different primary pitches.[34]

cal traditions.[35] Most important for our purposes is that the lexical tone category is *uniquely identifiable* on the basis of its melodic realisation; that is, there is a *constant* and *predictable* relationship between the speech-tone and its melodic realisation.[36] Thus in this genre, the correspondence between tone and tune may be said to be *strict,* or even complete.

1.2 Vietnamese

1.2.1 Speech tones in Vietnamese

Linguistically, the term 'Vietnamese' may be taken to denote a group of more or less mutually intelligible dialects spoken in Vietnam.[37] Northern Vietnamese, the dialect in which many 20th century composers tacitly or explicitly wrote and in which singers (until quite recently) tended to perform regardless of their dialect background, contrasts six distinct speech tones.[38] Figures 15.3 and 15.4 show examples of the six open-syllable tones, together with their pitch values on the five-level Chao scale augmented by the use of 'g' to represent glottalisation, an important feature of Northern Vietnamese tone production and perception.[39]

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34 Adapted from Tanese-Ito, 'The relationship', p. 122. Reproduced with permission of Cambridge University Press through PLSclear.

35 Yuen Ren Chao, 'Singing in Chinese', *Le maître phonétique* 3 (1924), pp. 9–10; Yuen Ren Chao, 'Tone, intonation'.

36 Stock, 'A reassessment'; Yung, 'Creative process'.

37 Laurence C. Thompson, *A Vietnamese Grammar* (Seattle: University of Washington Press, 1965).

38 James Kirby, 'Vietnamese (Hanoi Vietnamese)', *Journal of the International Phonetic Association* 41 (2011), pp. 381–392; Alexis Michaud, 'Final consonants and glottalization: New perspectives from Hanoi Vietnamese', *Phonetica* 61 (2004), pp. 119–146; Andrea Hoa Pham, *Vietnamese Tone: A New Analysis* (New York: Routledge, 2003). Although eight tones can be distinguished phonetically, two of them may be considered positional variants of other tones for present purposes, without loss of generality.

39 Marc Brunelle, 'Tone perception in northern and southern Vietnamese', *Journal of Phonetics* 37 (2009), pp. 79–96; Nguyễn Văn Lợi and Jerold A. Edmondson, 'Tone and voice quality in modern

Tone		*Example*	*Gloss*
Level (*ngang*)	33	*ba*	'three'
Mid-falling (*huyền*)	32	*bà*	'grandmother'
Rising (*sắc*)	24	*bá*	'aunt'
Checked (*nặng*)	2g	*bạ*	'register'
Broken (*ngã*)	3g5	*bã*	'waste'
Low-falling (*hỏi*)	21	*bả*	'poison'

Figure 15.3: The six open-syllable tones of Northern (Hanoi) Vietnamese, indicated according to their relative onset and offset pitch values. 'g' indicates the presence of glottalisation, a distinctive feature of tone in this dialect.

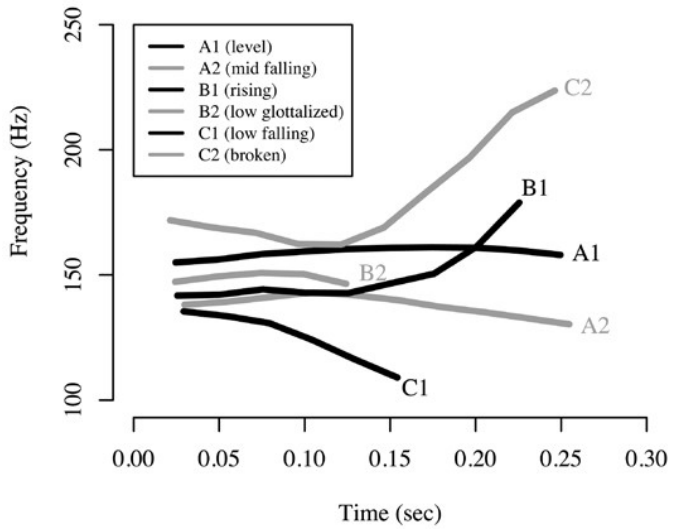


Figure 15.4: Pitch traces for the six open-syllable tones produced by a male speaker of Hanoi Vietnamese.[40]

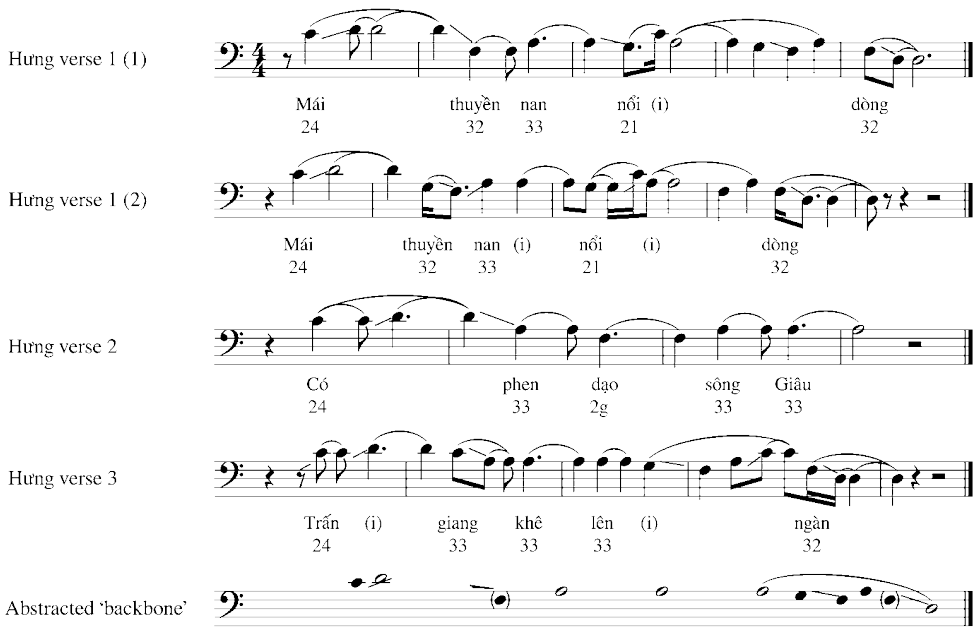
1.2.2 Chầu văn

In many types of Vietnamese traditional vocal music, similar basic principles apply as in Thai court song: there exists an (unwritten, unstated) melodic 'skeleton' to which arbitrary texts (themselves often set in a particular poetic metre) can be married. The realisation of the melodic skeleton, which may itself vary somewhat from artist to artist, is again largely determined by the particular text being sung. Here we will consider the case of *chầu văn* (lit.

northern Vietnamese: Instrumental case studies', *Mon-Khmer Studies* 28 (1998), pp. 1–18; Pham, *Vietnamese Tone*.

40 Kirby, 'Vietnamese', p. 386.

'serving literature'), a predominantly vocal genre of Vietnamese folk music performed as part of the *lên đồng* mediumship ritual.[41] Both the ritual and its musical accompaniment may be traced back at least to the 16th century and possibly much earlier,[42] and while the genre has by no means been immune to outside influences, it has to a large degree resisted radical change.[43] Music example 15.4 gives an example of a *chầu văn* melody, drawn from Norton. It compares three verses set in the *phú bình* mode[44] as performed by Norton's teacher Đặng Công Hưng. Similar to the Thai example discussed in Section 2.1.2, these verses also share a skeletal melody. This is presented as Norton's 'abstracted backbone', which he has based on all the pitches that occur in each rendition. The notes of the backbone were confirmed to be important structural pitches by Hưng (who, Norton notes, had some sense of the importance of the musical skeleton and actually made reference to it in his teaching, finding it to be a useful pedagogical tool).



Music example 15.4: Đặng Công Hưng's performances of three verses of Phú bình *(lines 1-4), together with Norton's abstracted backbone (line 5). (i) represents a non-lexical vocable. Optional pitches in the backbone are indicated with parentheses.*[45]

41 Norton, *Songs for the Spirits*.

42 Gisa Jähnichen, 'Barley Norton, "Songs for the Spirits: Music and mediums in modern Vietnam"' (review), *Asian Ethnology* 69 (2010), pp. 194–198 (p. 194); Norton, *Songs for the Spirits*, p. 22.

43 Norton, *Songs for the Spirits*, pp. 143–154.

44 Nguyễn Thuyết Phong, 'Vietnam', in Terry E. Miller and Sean Williams (eds), *The Garland Handbook of Southeast Asian Music* (London/New York: Routledge, 2008), pp. 247–290 (p. 283) notes that certain *chầu văn* modes have relatively more fixed melodic structures than others.

45 Adapted from Norton, *Songs for the Spirits*, p. 139.

Even a cursory examination of this brief example may convince the reader that there exists considerably more variability in the melodic realisation of particular tones than observed in the Thai example above. For instance, consider the word *thuyền,* meaning 'boat' or 'vessel', which bears a falling (32) tone. In Hưng's first performance of verse 1, it is realised syllabically on a constant pitch, but in the second performance it is set to a falling melisma. A constant pitch is also set to the word *dạo* in verse 2, which bears the checked (2g) tone. Similarly, falling melodies are not strictly set to syllables with falling tones *(e.g. giang* in verse 3, a word bearing a level tone), nor rising melodies to rising tones (*e.g. nổi* in verse 1, a word bearing a low-falling or falling-rising tone). To a first approximation, tone–tune correspondence in *chầu văn* is thus rather different from that of Thai court singing or Cantonese opera arias, in that speech-tones are not consistently encoded by melodic formulas or pitches.

What principles, then, govern tone–tune correspondence in *chầu văn*? Norton, remarking on the lack of a systematic study of the relationship between speech-tone and musical tune in Vietnamese, presents an analysis of tone–tune correspondence based on a total of three performances of two *chầu văn* pieces, in what may be the first such systematic published analysis undertaken of Vietnamese music.[46] For each of the six tones, Norton tabulates the number of times it co-occurs with a level or falling–rising melodic sequence. A correlation in the expected direction emerges even in this small sample: level tones tend to be sung to single notes, rising tones with rising melodies, and so forth. He notes that the observed exceptions can often be explained either as an imperative to follow the basic melody or a deliberate act on the part of the singer to avoid monotony.[47]

Norton also considers the degree to which the pitch direction of two successive notes relates to the linguistic tones of those notes (what I will refer to as a *bigram*). He notes two generalisations. First, a sequence of the 3g5 tone and either a 2g or 32 tone will almost invariably occur with a falling melodic sequence. Similarly, the 24 and 33 tones, when followed by the 21, 2g or 32 tones, will also be set to falling melodies. In the reverse orderings, the melodies will instead be rising. The principle that seems to be at play here is not so much the pitch of a particular note, but rather the relative pitch heights of the notes in a *bigram*, relative to the *offset*, or end point, of the lexical tones on the words being sung. For example, the 24 rising tone has an onset of 2 (relatively low pitch) but an offset of 4 (relatively high pitch). By this principle, a 24-32 sequence would thus count as falling (a transition from 4 to 2). In what follows, I will refer to this as the *offset principle*.

H. O. Coleman[48] was among the first Western observers to describe agreement in the direction of change of both the melodic and tonal sequences, but systematic, quantitative analyses showing the principle at work did not come until later.[49] The importance of the tonal

46 Norton, *Songs for the* Spirits, pp. 140–143. Norton's analysis of tone–tune correspondence originally appeared in Norton, 'Music and possession in Vietnam' (PhD dissertation, SOAS, University of London, 2000). Jason Gibbs, 'Giai điệu của thi ca: tiếng Việt và âm nhạc [Poetry's melody: the Vietnamese language and music]', *Văn hoá nghệ thuật*, 199 (2001), pp. 83–88 also briefly discusses some principles of this type.

47 Norton, *Songs for the Spirits*, p. 144; see George Herzog, 'Speech-melody and primitive music', *The Musical Quarterly* 20 (1934), pp. 452–466.

48 H. O. Coleman, 'Chinese Singing', *Le maître phonétique* 3 (1924), pp. 10–11.

49 Paul Richards, 'A quantitative analysis of the relationship between language tone and melody in a Hausa song', *African Language Studies* 13 (1972), pp. 137–161; Marius Schneider, 'Tone and tune in west African music', *Ethnomusicology* 5 (1961), pp. 204–215.

offset in determining the direction of the tonal transition relevant for text-setting was, to the best of my knowledge, first raised by Marjorie Chan in a study of Cantonese popular music ('Cantopop') and subsequently expanded upon by Wong and Diehl, Ho and Lo among others.[50] If we now return to Music example 15.4 and notate each syllable with its tonal offset, we may treat the sequence of speech-tone offsets as one line, and the melodic contour as a second line, and compare the directions of the transitions between the two. The results are shown in Figure 15.5. What we find is that, in almost every case, the setting is *similar*: that is, if the song melody is rising, the transition from tone to tone is also rising, falling if falling, and level if level. For the two of the three cases where these transitions do not so match (given in italics in Figure 15.5), the settings are *oblique*: either the melodic line rises or falls while the speech-tone offset transition remains level, or vice versa. There is just a single case where the two lines move in opposite directions (*i. e*. one rises, the other falls), shown in bold in Figure 15.5, which I refer to as a *contrary* setting. Finally, note that all three instances of non-similar settings involve a transition from the non-lexical (and therefore potentially toneless) vocable syllable *i*. Thus, here again, the correspondence between tone and melody appears to be extremely consistent, albeit governed by a different set of principles from those active in *phleng thai doem*.

tone transitions	4-2	2-3	3-3	3-1	1-3	3-2
Verse 1(1)	F	R		F	R	F
Verse 1(2)	F	R	L	F	R	F

tone transitions	4-3	3-2	2-3	3-3
Verse 2	F	F	R	L

tone transitions	4-3	3-3	3-3	3-3	3-3	3-2
Verse 3	**R**	*F*	L	L	*F*	F

Figure 15.5: Correspondence between tone and melody in the excerpt from Phú bình *shown in Music example 15.4. Tone transitions show the offsets of each pair of syllables. Melody is notated as (*R*)ising, (*F*)alling or (*L*)evel. Oblique settings are indicated by* italics*; contrary settings by* bold*. The vocable (*i*) is treated as bearing a mid tone (*i. e. *pitch offset of 3).*

50 Chan, 'Tone and melody in Cantonese'; Patrick C. M. Wong and Randy L. Diehl, 'How can the lyrics of a song in a tone language be understood?', *Psychology of Music* 30 (2002), pp. 202–209; Ho, 'The 'tone–melody interface'; Albert T. C. Lo, 'Correspondences between lexical tone and music transitions in Cantonese pop songs: A quantitative and analytical approach' (MA thesis, University of Edinburgh, 2013).

Tonal text-setting in acculturated song (2.1–2.2)

In this section, we briefly describe tonal text-setting conventions in two types of acculturated song in Thai and Vietnamese, in order to permit a preliminary comparison of how the adoption of Western musical forms and structures impacts text-setting practices in tone languages. In genres such as *chầu văn* and Thai court singing, as discussed above, the realisation of the tune is to a very large extent dependent on the text to which it is set. Acculturated song, on the other hand, is typically strophic in form. This presents the composer with a rather different type of task: for a given *tune*, they must now create a series of *texts* which are acceptable in terms of tone–tune correspondence (as well is being able convey an interpretable linguistic/aesthetic message). This raises the possibility that tone–tune correspondence will be less important or even ignored in acculturated song. Since previous research has shown that tone–tune correspondence can in fact be quite robust in acculturated song, I focus here on a different question: given that rather different conventions were observed in the classical examples considered for Thai and Vietnamese, is there any evidence that these conventions are still present, overtly or covertly, in acculturated song?

2.1 Tân nhạc: Vietnamese 'new music'

First we will consider the case of Vietnamese *tân nhạc* or 'new music', a term for a variety of music influenced by Western musical traditions but incorporating a broad spectrum of styles.[51] It is sometimes used as a cover term encompassing a number of sub-genres including *nhạc tiền chiến* or 'pre-war music' (music composed primarily before the country's division in 1954, characterised by romantic, sentimental and/or patriotic lyrical themes), *nhạc vàng* or 'yellow music' (music of the 1954–1975 period, strongly associated with south Vietnam) and *nhạc đỏ* or 'red music' (revolutionary songs and marches). While initially popular with younger listeners, it took *tân nhạc* some time to become accepted by the Vietnamese musical establishment;[52] however, its subsequent popularity and ubiquity provide a vast body of work in which to investigate the nuances of tonal-text setting.

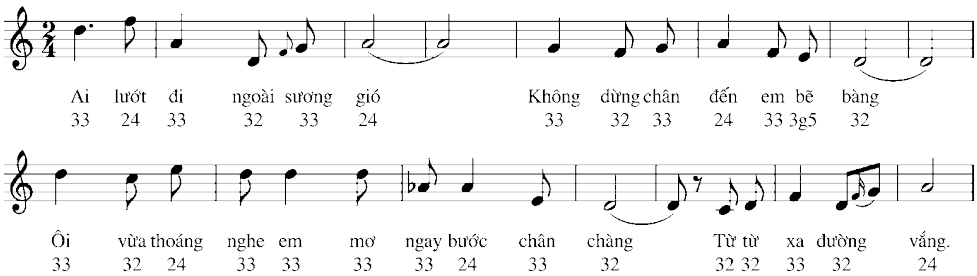
Here, I summarise our work to date on tone–tune correspondence in Vietnamese using a corpus of 20 *tân nhạc* compositions.[53] Working primarily from commercial or freely available sheet music, we notate the direction of pitch movements between successive notes (rising, falling, level) and as well as the speech-tone offsets, as described in section 3.2.2 above.

51 Eric Henry, 'Tân nhạc: Notes toward a social history of Vietnamese music in the twentieth century', *Michigan Quarterly Review* XLIV (2005), available at http://hdl.handle.net/2027/spo.act2080.0044.122 (Access 3 October 2019).

52 Jason Gibbs, 'Reform and tradition in early Vietnamese popular song', *Nhạc Việt* 6 (1997), pp. 5–35; Jason Gibbs, 'Nhac Tien Chien: The origins of Vietnamese popular song', *ThingsAsian.com* (1998), available at http://thingasian.com/story/nhac-tien-chien-origins-vietnamese-popular-song (Access 28 November 2019); Jason Gibbs, 'Giai điệu của thi ca: tiếng Việt và âm nhạc', *Văn hoá nghệ thuật* 199 (2001), pp. 83–88; Jason Gibbs, 'The West's songs, our songs: The introduction and adaptation of Western popular song in Vietnam before 1940', *Asian Music* 35 (2003), pp. 57–83.

53 For details, see James Kirby and D. Robert Ladd, 'Tone–melody correspondence in Vietnamese popular song', in *Proceedings of the 5th International Symposium on Tonal Aspects of Languages* (TAL-2016) (2016), pp. 48–51.

By way of example, Music example 15.5 gives an excerpt from the song *Buồn tàn thu* ('Sadness for Autumn's Fading') by the composer Văn Cao (perhaps most well known in the West for having composed the modern Vietnamese national anthem *Tiến quân ca*).



Music example 15.5: The opening stanza of Buồn tàn thu *by Văn Cao.*[54] *Lyrics are given in Vietnamese orthography, with tone indicated numerically below according to (relative) onset and offset pitch (1=lowest, 5=highest; see Figure 15.3).*

Figure 15.6 shows the tone–tune correspondences for each of the four phrases in turn, computed using the 'offset principle' described in Section 3.2.2. In the first phrase (*Ai lướt đi ngoài sương gió*), the tonal and musical transitions are all instances of similar settings. The second phrase (*Không dừng chân đến em bẽ bàng*) contains the only instance of a contrary setting in the stanza, involving the rare 'broken' (*ngã*) tone in the disyllabic compound *bẽ bàng* ('to be ashamed, shy; to lose face'). In the third phrase (*Ôi vừa thoáng nghe em mơ ngay bước chân chàng*), there is a single instance of an oblique setting (where a level melody is set to *ngay bước,* a rising tonal transition). The fourth phrase (*Từ từ xa đường vắng*) also contains an example of an oblique setting, but this occurs internal to the disyllabic reduplicant *từ từ* 'slowly, leisurely'. All of the other transitions are instances of similar settings.

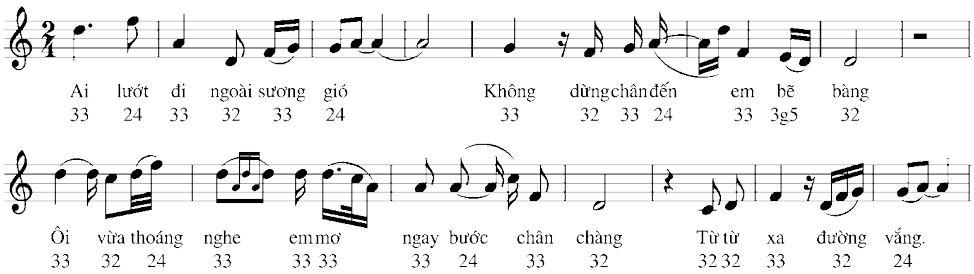
phrase										
1	tone transitions	3-4	4-3	3-2	2-3	3-4				
	melody	R	F	F	R	R				
2	tone transitions	3-2	2-3	3-4	4-3	3-5	5-2			
	melody	F	R	R	F	**F**	F			
3	tone transitions	3-2	2-4	4-3	3-3	3-3	3-3	3-4	4-3	3-2
	melody	F	R	F	L	L	*F*	*L*	F	F
4	tone transitions	2-2	2-3	3-2	2-4					
	melody	R	R	F	R					

Figure 15.6: Correspondence between tone and melody in Buồn tàn thu. *Tone transitions show the offsets of each pair of syllables. Melody is notated as (*R*)ising, (*F*)alling or (*L*)evel. Oblique settings are indicated by* italics, *contrary settings by* bold.

While the notation in Music example 15.5 suggests that most syllables are realised on a single monophonic note, this is unlikely to reflect the realities of the verse when sung aloud.

54 Adapted from Gibbs, 'Giai điệu', p. 88. Reproduced with permission of the author.

If we undertake the same analysis using a more detailed transcription of a particular performance – in this case, by Thái Thanh, from the *Shotguns 70* recording[55] – we see that the correspondence between tone and tune is essentially unchanged (Music example 15.6). While the introduction of melismata and glissandi enhance the perception of some rising tones, they are also seemingly introduced as purely aesthetic elements. For example, both the syllables *nghe* and *mơ* in measure 10 are realised melismatically, despite both having level word-tones. This suggests that performance considerations are unlikely to alter the underlying text–tune alignment radically, or equivalently, that constraints on text–tune correspondence are being recognised at the point of composition.



Music example 15.6: The opening stanza of Buồn tàn thu *as performed by Thái Thanh (date uncertain, probably c. 1970).*[56]

Repeating this procedure for all the songs in the current corpus allows us to tabulate the number of transitions in which the musical and linguistic pitch sequences are (mis)aligned (Figure 15.7).

		melodic sequence		
		up	*down*	*same*
tone sequence	*up*	1136	81	84
	down	72	1111	59
	same	256	273	473

Figure 15.7: Correspondence between melodic and tonal transitions according to the 'offset' model in the Vietnamese tân nhạc *corpus.*[57]

The overall degree of similar settings turns out to be 77% (2,720 of 3,545 transitions). Interestingly, what seems to be more crucial in *tân nhạc* than a preference for *similar* settings is an imperative to avoid *contrary* settings. However, this is to some extent a function

55 http:data60.chiasenhac.com/downloads/1292/5/1291088-4297eedf/128/Buon%20Tan%20Thu%20Pre%2075_%20-%20Thai%20Thanh.mp3 (Access 28 November 2019).

56 Adapted from Gibbs, 'Giai điệu', p. 88. Reproduced with permission of the author.

57 Kirby and Ladd, 'Tone–melody correspondence', p. 50.

of the melodic sequence. When two musical notes are the same, identical tone sequences are preferred; when two tones in a *bigram* are the same, greater variability in the musical note sequence seems possible. Again, such sequences are overwhelmingly sequences of level tones, which appear to be less constrained by tonal text-setting principles and to which composers and performers may actively set to oblique melodies in order to avoid monotony.[58]

The degree to which different languages and genres prefer similar settings, as opposed to seeking to avoid contrary settings, is an open research question. Work on tonal text-setting in Cantonese pop music[59] suggests a stronger preference for similar settings may be active in this genre compared to Vietnamese. For example, Wong and Diehl reported a rate of 92% similar settings,[60] while in a more extensive study of Cantonese, Lo reports a rate of 83% similar settings.[61] In other languages, such as Burmese,[62] Shona[63] or Kalam Kohistani,[64] the preference for similar settings seems even more relaxed, and it is widely reported that Mandarin vocal compositions frequently fail to take tone–tune correspondence into account.[65]

For present purposes, however, this example suffices to illustrate that a very similar principle appears to guide tonal text-setting practices in both traditional and acculturated Vietnamese song. To conclude, we will now consider an analogous case for Thai.

~~3.2~~ *Post-war Thailand: luk thung*

The final example we will consider is from the Thai genre of *luk thung* (ลูกทุ่ง lit. 'child of the fields'). *Luk thung* emerged from *phleng thai sakon* (เพลงไทยสากล) or 'international' Thai music at roughly the same time as *tân nhạc* came on the Vietnamese scene, *i.e.* in the late 1930s and early 1940s. Growing out of the earlier *ramwong* (รำวง) and *phleng chiwit* (เพลงชีวิต) styles, *luk thung* became a distinctive genre in its own right in the 1950s.[66] *Luk thung* has often been associated with Central Thailand, especially Suphanburi province, the home of several of its biggest stars, such as Suraphol Sombatchareon and Pumpuang Duangjan. However, its direct

58 Norton, *Songs for the Spirits*, p. 142; Vũ Đinh Trọng Thắng, p.c., Hanoi, June 2015.

59 Chan, 'Tone and melody interaction'; Ho, 'The tone–melody interface'; Lo, 'Correspondences'; Wong and Diehl, 'How can the lyrics'.

60 Wong and Diehl, 'How can the lyrics', p. 205.

61 Lo, 'Correspondences', pp. 22–23.

62 Robert Garfias, 'Speech and melodic contour interdependence in Burmese music', *College Music Symposium* 21 (1981), pp. 33–39; Muriel C. Williamson, 'The correlation between speech-tones of text syllables and their musical setting in a Burmese classical song', *Musica Asiatica* 3 (1981), pp. 11–28.

63 Murray Schellenberg, 'Singing in a tone language: Shona', in Akinloyè Ojó and Lioba Moshi (eds), *Selected Proceedings of the 39th Annual Conference on African Linguistics* (Somerville, MA: Linguistic Research and Languages in Africa, Cascadilla Proceedings Project, 2009), pp. 137–144.

64 Joan L. G. Baart, 'Tone and song in Kalam Kohistani (Pakistan)', in Hugo Quené *et al.* (eds), *On Speech and Language: Studies for Sieb G. Nooteboom* (Utrecht: Netherlands Graduate Institute of Linguistics, 2004), pp. 5–16.

65 Chan, 'Tone and melody interaction'; Yuen Ren Chao, 'Tone, intonation'; Ho, 'The tone–melody interface'.

66 See James L. Mitchell, *Luk Thung: The Culture and Politics of Thailand's Most Popular Music* (Seattle: University of Washington Press, 2015) for a comprehensive treatment.

antecedents, and arguably its strongest listener base, stem from Thailand's north-eastern Isan region, home to a musical and linguistic culture which in many respects is closer to that of neighbouring Laos than to Central Thailand. There is a great deal of unexplored variation in the regional styles and accents used by both composers and performers, which is one reason to consider this genre in more detail from a text-setting perspective. However, it is also of interest because its vocal style is, or was, much closer to traditional Thai folk styles compared to the more highly Westernised *luk krung* (ลูกกรุง).[67] In *luk thung* the instrumentation and rhythms are to some extent Westernised, but the songs themselves, particularly the vocal melodies, have (or are perceived to have) roots in more traditional Thai and Lao folk music genres[68] as well as drawing from Thai classical and court traditions.[69]

I have made a preliminary assessment of how the type of analysis described above for Vietnamese and Cantonese fares with a corpus of 50 *luk thung* songs based on transcriptions compiled by the Committee of the Office of National Culture of Thailand.[70] The direction of the musical and tonal transitions were compared for each transcription using the 'offset principle', using the tone representations given in Figure 15.1. Our example is taken from *Chanthana thi rak* (ฉันทนาที่รัก 'Darling Chanthana') (Music example 15.7). This short instance contains six examples of contrary settings and four oblique settings out of 22 total transitions, a ratio approaching 50%. In fact, when applied to the entire *luk thung* corpus, this procedure finds transitions computed based on tonal offsets to be characterised by similar settings in just 57% of cases, similar to rates reported for Thai pop in previous studies.[71] Clearly, this is far lower than what we have observed for Cantonese or Vietnamese. Moreover, instances of contrary settings, where the tone sequence falls and the melodic sequence rises (or vice versa), are relatively much more common in this corpus compared to what was observed for Vietnamese (Figure 15.7).

What might explain this striking difference? One might suspect, as before, that the transcriber's notation is leaving out important aspects of the singer's performance, and wonder if a narrower transcription might not lead to a greater rate of similar settings. A more detailed transcription, as recorded by Rakchat Sirichai[72] (รักชาติ ศิริชัย) in the mid-1970s, is shown in Music example 15.8. Comparing the patterns of tone–tune correspondence between the two versions (Figure 15.9), we find that while the performance contains fewer instances of oblique settings, it actually introduces an additional instance of a contrary setting. Thus, as in

67 Eamsa-Ard Lamnao, 'Thai popular music: The representation of national identities and ideologies within a culture in transition' (PhD dissertation, Edith Cowan University, 2006), pp. 13–14.

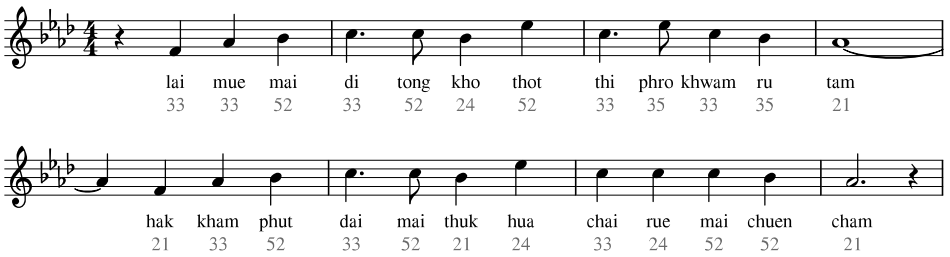
68 Amporn Jirattikorn, 'Lukthung: Authenticity and modernity in Thai country music', *Asian Music*, 37 (2006), pp. 24–50; James Mitchell, 'Sorapet Pinyoo and the status of Pleeng Luuk Tung', *Journal of Southeast Asian Studies* 40 (2009), p. 295.

69 Watanasawad Kriengkrai, 'An ethnolinguistic study in the lyrics of Thai country and city songs' (PhD dissertation, Mahidol University, Bangkok, 2006), chapter 4; Mitchell, *Luk Thung*, pp. 38–40.

70 Committee for the Office of National Culture, Thai Ministry of Education, *Kueng satawat pleeng luuk thung Thai* (Bangkok: Amrin Printing Group, 1989).

71 List, 'Speech melody'; Saurman, 'The agreement'; Chawadon Ketkaew and Pittayawat Pittayaporn, 'Mapping between lexical tones and musical notes in Thai pop songs', in *Proceedings of the 28th Pacific Asia Conference on Language, Information and Computation (PACLIC 28)* (Phuket, 2014), pp. 160–169.

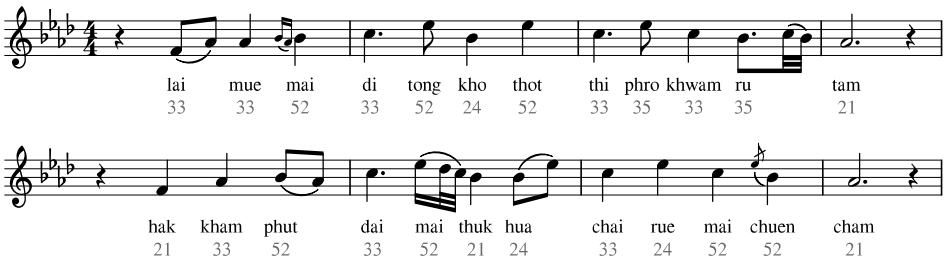
72 https://www.youtube.com/watch?v=MzTYdQrm5cE (Access 28 November 2019).



Music example 15.7: Excerpt from a transcription of ฉันทนาที่รัก Chanthana thi rak.[73] *Lyrics are given in RTGS romanisation, with tone indicated numerically below according to (relative) onset and offset pitch (1=lowest, 5=highest; see Figure 15.1).*

		melodic sequence		
		up	*down*	*same*
tone sequence	*up*	2192	611	135
	down	594	2122	173
	same	1064	1081	444

Figure 15.8: Correspondence between musical and tonal transitions calculated according to the 'offset' principle in the Keung Sathawat Phleng Luk Thung Thai *corpus.*



Music example 15.8: Excerpt from Chanthana thi rak*, transcribed to reflect a recorded performance by Rakchat Sirichai. Transcription by the author.*

the Vietnamese example considered above, it does not seem to be the case that violations of tone–tune correspondence are consistently 'repaired' in performance; rather, they appear to be present at the point of composition.

One possible explanation for the low rates of similar settings in this example may simply be because the 'offset principle' does not apply as rigidly in *luk thung* as it seems to in *tân nhạc* and Cantopop. Instead, the relevant tonal transition may be between onset and offset, or offset and onset, at least in some cases. For instance, the transition from a 33 mid tone to a 52 falling tone in the first and fifth measures of Music example 15.8, a case of a contrary set-

73 Adapted from the Committee for the Office of National Culture, *Kueng Satawat*, p. 137.

ting for the offset model, appears similar if the tonal onset (5) of the second tone is regarded as the target. This is not universally the case, however, as the transition from mid 33 to high 35 in measure 3 is only a case of similar setting if the tonal offset of the second syllable is considered. Thus universally privileging the tonal offset, as seems empirically motivated for Vietnamese and Cantonese, may not appropriate for Thai.[74]

tone transitions	3-3	3-2	2-3	3-2	2-4	4-2	2-3	3-5	5-3	3-5	5-1
transcription	*R*	**R**	R	*L*	**F**	R	**F**	R	F	**F**	F
performance	L	**R**	R	**R**	**F**	R	**F**	R	F	**F**	F

tone transitions	1-3	3-2	2-3	3-2	2-1	1-4	4-3	3-4	4-2	2-2	2-1
transcription	R	**R**	R	*L*	F	R	F	*L*	*L*	*F*	F
performance	R	**R**	R	*L*	F	R	F	R	F	*F*	F

Figure 15.9: Correspondence between musical and tonal transitions calculated according to the 'offset' principle in both versions of Chanthana thi rak.

Another possibility is that, as many *luk thung* compositions use words and pronunciations characteristic of the Isan language[75] – which is linguistically closer to Lao than to Standard Thai – the use of canonical Standard Thai pitch representations for the tones is distorting the tone–tune relationship. However, this seems less likely to be an issue in the particular case of *Chanthana thi rak,* where the lyrics are recognisably Standard Thai in origin and pronunciation. Instead, I would like to draw attention to a different possibility. A careful comparison between Music examples 15.7 and 15.8 suggests that the melodic formulae identified by Tanese-Ito for Thai court song (Music example 15.2) are also identifiable in *luk thung*. In particular, if the melody (broadly construed) fails to provide a suitable carrier for the speech-tone, it will be modified by the singer to create an appropriate 'surface' realisation. For example, consider syllables 8 and 9 in Music example 15.8 above (*thi phro*). The rising C to E♭ transition matches Tanese-Ito's 'Rising' formula (Music example 15.2), and the performance transcription matches that of the composer. But just two syllables later there is another high-rising tone, on the syllable *ru*, which is performed with an ascending vocal trill, perhaps because the falling melodic transition from C to B♭ does not provide an acceptable carrier. Similarly, the notes associated with syllables 5 (*tong*) and 7 (*thot*), which are unmodified in the performance, are both followed by notes of lower pitch on syllables 6 and 8, respectively; but the melismatic realisation of syllable 14 (*phut*) in the performance creates a falling melody absent in the score. This is especially interesting because these modifications do not seem to be repairing violations of the offset-based constraint on tone–tune parallelism, but have

74 Ketkaew and Pittayaporn, 'Mapping between lexical tones'; Chawadon Ketkaew and Pittayawat Pittayaporn, 'Do note values affect parallelism between lexical tones and musical notes in Thai pop songs?', in *Proceedings of the 18th International Congress of Phonetic Sciences* (Glasgow: The University of Glasgow, 2015).

75 James Mitchell, 'Review article: Waeng Phalangwan – a Lao-Isan perspective on Thai Luk-thung', *Journal of Lao Studies* 2 (2011), pp. 66–96; Mitchell, *Luk Thung*.

more to do with ensuring that each *individual* lexical tone is 'matched' with an appropriate melodic transition.

If this analysis holds up to further scrutiny, it suggests two very interesting things: first, that there are language- and potentially genre-specific rankings of constraints on tone–tune correspondence (viz., a stronger preference for similar settings in Vietnamese than in Thai); but also that, while tone–tune mapping conventions are not the same in all tone languages, such conventions may be so fundamental as to permeate even highly acculturated song forms. A related possibility is that the tone system being used as the basis for the computation of tone–tune correspondences is an archaic one, as Chao argued to be active for Chinese *kunqu*.[76] One could also imagine a role is played by structural aspects of the tone system, the interval of the musical transition or the position of the transition in the metrical line. In any case, these remain questions for future research.

Conclusions: Tonal text-setting, continuity and change

As this brief comparison has illustrated, tonal text-setting practices are not universal across tone languages, nor are they static within a single language. However, the analysis provided here suggests that there may be more cross-genre continuity within a single language than has often been assumed.[77] It is of course possible that this is simply an accidental fact about the two languages considered here, or the genres examined; but I believe it is sufficiently intriguing as to warrant further careful investigation. This is because, if tonal text-setting constraints do persist across time and genre, they may be a particular robust indicator of more fundamental differences in linguistic and/or musical practices.

One may wonder to what extent tonal text-setting is a conscious process. When Vietnamese composers first began to set lyrics to Western popular melodies, evidence suggests that they were very aware that tone and tune were at times in conflict, and a number of composers and musicians published articles that directly addressed this fact.[78] The famous Vietnamese teacher and composer Lê Thương went so far as to worry in print that the Vietnamese language – that is, its system of lexical tones – might hinder the 'progress' of Vietnamese music.[79] Given the strong interest in Western music, composition, and performance that has persisted in Vietnam from the 1930s, one might expect that tone–tune correspondence would be a secondary concern, or even simply ignored, at least in acculturated song. However, in spite of (or perhaps because of) centuries of occupation and pressure from outside forces, 'it was unacceptable to the Vietnamese to be simply "seduced" and overrun by Western music'.[80] While young Vietnamese were on the one hand enamoured by modern Western songs, at the same time this music retained an inherently foreign character, which may have contributed to

76 Chao, 'Singing in Chinese'; 'Tone, intonation'.

77 List, 'Speech melody'; Saurman, 'The agreement'; Vicki-Ann Ware, 'Stylistic and cultural transformations in Bangkok fusion music from 1850 to the present day, deading to the development of Dontri Thai Prayuk (PhD dissertation, Monash University, 2006).

78 Gibbs, 'Reform and tradition'; Gibbs, 'Giai điệu'.

79 Lê Thương, 'Giọng nói tiếng ta với âm nhạc mới' ['Our way of speaking and new music']. *Bách Khoa* 45 (1958), pp. 58–60.

80 Gibbs, 'Reform and tradition', p. 1/6.

an increased (if subconscious) awareness of certain aspects of more traditional Vietnamese musical practices. Similarly, in Thai music, the expression of identity – be it a broader sense of 'Thai-ness'[81] or a regional identity such as that often expressed in *luk thung* lyrics[82] – is of paramount importance to both musicians and listeners, and a close mapping between linguistic tone and musical melody is one means of overtly encoding a connection with the past.[83]

The present study indicates that composers are not only quite skilled at navigating the simultaneous and competing musical and linguistic demands, but that they are capable of doing so in a way that preserves traditional practices while also embracing innovation.[84] It is thus perhaps not surprising that similarities in tonal text-setting can be found in both traditional and modern 'popular' song styles. These similarities suggest a number of interesting avenues for future exploration, compositional as well as linguistic. For example, can violations of text-setting practices be deliberately employed to artistic or aesthetic effect? Does the narrow linguistic background of a composer (in the sense of the dialect or regional variant they compose in) influence their text-setting practices, and if so, are such differences salient to listeners?

In conclusion, tonal text-setting constraints, like metrical text-setting constraints in European languages, are not universal, but there do appear to be some general principles involved. As in language, there is variation, but that variation is constrained. Moreover, these principles appear capable of transcending time and genre. Text-setting constraints provide a thread connecting the past to the present, and their further study promises to enhance our understanding of musical continuity and change.

81 Ware, 'Stylistic and cultural transformations'.

82 Lamnao, 'Thai popular music'.

83 Ware, 'Stylistic and cultural transformations', chapter 3.

84 Gibbs, 'The West's songs'.