Sounding Thai: Instrumental Translation, Language-Melody Correlation, and Vocal Expressivity in *Thai Sakon* Music from the 2010s

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*T*HAI *sakon* is a genre of Thai popular music with an international, widely palatable sound and overt stylistic influences from Western pop and rock. In his discussion of globalization in the "World Popular Music" section of the *Grove Music Online* article on popular music, Peter Manuel offers the following commentary on *Thai sakon* and related genres:

> [...] entire cultures have forsaken indigenous music traditions in favour of Western-style idioms. By far the most popular musics throughout most of East and South-east Asia, for example, are varieties of the Western pop ballad and soft rock (e.g. Japanese 'J-pop', Korean 'K-pop', Chinese Cantopop, 'pop Indonesia', and Thai *sakon*) in which distinctively Asian stylistic features are generally minimal. Such rearticulations of Western 'light music' may be skilful, and may even be seen as forming the bases for authentic music cultures. Nevertheless, it remains significant that, for whatever complex historical reasons, musical energies in these vast societies have been devoted less to the cultivation of distinctive, original styles than to Western-style pop—especially to what would be seen in the West as the most bland and commercial-sounding 'easy-listening' music. (Manuel [2001] 2015)

Whether or not one agrees with this disapproving portrait of *Thai sakon* and other popular genres, the above description raises a host of productive questions regarding the relationship between traditional and popular musics. Which music traditions have potentially been forsaken? What are the "generally minimal" Asian stylistic features in *Thai sakon*, and how accurate is it to characterize the genre as a "rearticulation" of Western light rock? What alternative views emerge from detailed music analysis that considers the genre according to specific moments within individual performances rather than in the wider context of global pop? How does *Thai sakon* sound like Thai music?

Close analyses of some of the most widely marketed and listened-to performances of *Thai sakon* from the 2010s show that the genre is rooted in Thai musical practices in a variety of ways. Analytical exploration of several recordings from this time period reveals aspects of Thai traditional music, both folk and classical, which point toward a view of *Thai sakon* as more of a hybrid form than a simple replication of Western soft rock. Underneath the broadly familiar currency of studio production, rock-pop instrumentation, and transparent diatonicism in *Thai sakon,* one finds distinctive approaches to instrumental performance, linguistic-melodic relationships, and vocal expression. Software-assisted music analysis that

integrates traditional transcription, spectrograms, fundamental frequency measurements, and an examination of speech tone-melody correlation casts such approaches into relief. Focusing on several selected recordings from the 2010s, this article proceeds by providing a brief historical context for *Thai sakon*; considering lyrics that relate to Thai traditions; examining aspects of instrumentation including hybridity and translation; comparing the tones of the Thai language to vocal melody; and identifying traditional Thai vocal practices. It concludes with brief thoughts about underlying historical dynamics and ideas for further research.

THAI POPULAR MUSIC AND *THAI SAKON*

Thai sakon, along with *luk thung* (Thai country music; literally, "children of the field"), developed in Thailand in the twentieth century as a prominent popular music genre.[1] Both genres are notable for the ways in which they have incorporated outside influences. Western music was introduced to the Thai royal court during the reign of King Rama IV (Mongkut) in the 1850s and 60s, and military band music established a presence leading into the twentieth century. After Thailand's 1932 military coup, Western-influenced popular music became more widespread due to governmental efforts at cultural modernization and restrictions placed upon classical Thai music (Siriyuvasak 1990, 62; Sriget 2014, 62; Mitchell 2015, 11). David Morton, drawing on the recollections of his Thai teacher and informant Prasidh Silapabanleng, noted that during the mid-1930s, traditional Thai music was discouraged "practically to the point of being forbidden—tolerated only if the compositions were performed on Western instruments similar to the Thai instruments" (1976, 16). Going into the 1940s, Thai popular music drew inspiration from Western dance hall music; in 1946, the late King Bhumibol Adulyadej created his second piece, "Love at Sundown" (lyrics by Chakraband Pensiri), which combines American jazz melodies, harmonies, and rhythm with Thai lyrics and has become widely loved and learned in Thailand. According to Ubonrat Siriyuvasak, the Westernized music of the 1940s (which she refers to as *dontri sakol*, i.e., *sakon* or "modern" music) "forms the bedrock" of later twentieth-century Thai popular music (1990, 62).

In the second half of the twentieth century, *luk thung* developed as a modernized mix of traditional musics from multiple regions of the country, especially the Isan provinces in the Northeast (Miller 1998, 331–32; Mitchell 2015, 7–44). During the 1950s and 60s, music referencing rural Thai lifestyles (labeled as *phleng talad* or *phleng chiwit*) gained popularity through the medium of television and eventually secured a place in the wider Thai popular music scene as *luk thung*. In contrast, *Thai sakon* further developed during this time as music that was more outwardly Western-influenced, a consequence of American military presence

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1. Other significant twentieth-century genres of Thai popular music not addressed in this study include *luk krung* ("city" music as opposed to the "country" genre of *luk thung*) and *phleng phua chiwit* ("songs for life," a genre that parallels politically oriented American folk music of the 1960s). *Phleng* ("song" or "composition") along with modifiers is a common way of labeling popular music genres (see Myers-Moro 1993, 23). The romanizations of these and other Thai musical terms in this study generally follow those of Miller (1998), although there remains no standard approach to doing so (see Wuttipong 2012, 32–33).

and the associated cultural influences that grew dominant in Bangkok by the 1960s.[4] The imitation of Western styles was so prominent that it could veer toward plagiarism, and by the 1970s and 80s, *Thai sakon*, under the rubric of "string combo" and eventually "string", was mainstream (Eamsa-ard 2006, 18–20; Wuttipong 2012, 49–55). In 1986, a rock band named Micro released the single "Rak pon pon (รักปอนปอน)," which quickly became a hit. The song's melody is exactly identical to that of "Stacy," a 1985 track by the Los Angeles band Fortune, and the musical arrangement is very similar, but the lyrics are in Thai and translated smoothly enough for the song to have become popular in Thailand. Micro's "Rak pon pon" is one example of how many of the components of music that young people in Thailand preferred, ranging from particular musical instruments, certain singing approaches, and production techniques, to general aspects of melody, harmony, and rhythm, showed substantial evidence of Westernization (Amatayakul 1993). As Thai people discovered British and American music, appropriations of musical approaches from those cultures became a common currency for *Thai sakon*. Even though *luk thung* music maintained a sizable audience and evolved during the last few decades of the twentieth century, its rural affiliations limited its ability to achieve widespread status and popularity during this time (Sriget 2014, 160).[5] Meanwhile, *Thai sakon,* with an attenuated sense of traditional and regional Thai practices, approached the 1990s in parallel with Thailand's rapidly globalizing economy.

Terminologically, *Thai sakon* is a category that explicitly references internationalization and music outside of Thailand. The word *sakon* means "common," "international," or "modern," and it relates to labels that have been used to describe strongly Westernized Thai music: "sakon" (Miller 1998), "string" (Siriyuvasak 1990; Jirattikorn 2006), "string combo" (Ketkaew 2015), "Thai sakon" (Manuel 2001/2015), "Thai pop" (Mitchell 2015), and "Thai Song" (in Thai online music sites such as Kapook and SiamZa).[6] In the context of the Thai music industry, *sakon* is often used to refer to songs by foreign artists in a language other than Thai. "String," or "string combo," tends to include the prototypical rock band instrumentation of guitar, bass, and a drum set, and it refers to Western-influenced music played by such

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4. Such military-prompted incorporations of Western music recall Bruno Nettl's (1985) ideas on Westernization. Discussing the sometimes-conflated categories of modernization and Westernization, he writes: "Two strands of history come together: the introduction of Western music to non-Western cultures and the resulting musical turmoil resulting in many forms, concepts, sounds, contexts; and the gradual discovery of the powerful role of these culturally mixed musics by ethnomusicologists who were at first loath to recognize them" (28–29).
5. This scenario would change after the Asian financial crisis of 1997, as Jirattikorn (2006) and Mitchell (2015) have shown. Mitchell discusses *luk thung's* rise in status after this point and the corresponding benefit to Isan cultural forms (41–44), while Jirattikorn outlines four changes to *luk thung* as it crossed into the new millennium: 1) less expectation of a rural background for the singers; 2) less of a "lower-class" connotation; 3) more modern references and city-amenable attitudes in the lyrics; and 4) stylistic borrowings from genres such as salsa, techno, rap, and hip-hop (34–38). In other words, despite one being putatively Thai and the other putatively internationally-oriented, the stylistic boundary between *luk thung* and *Thai sakon* is increasingly blurry after 2000.
6. Ketkaew (2015) and Eamsa-ard (2006) use *Thai sakon* as an umbrella category for Thai popular music. Sources such as Jirattikorn (2006) and Mitchell (2015) use *phleng Thai sakon* to refer specifically to the Westernized popular music of the late 1930s and 40s that fed into the development of *luk thung*. Wuttipong notes that *sakon* "refers, almost exclusively, to music which has been influenced by distinctly Western styles and forms" (2012, 6).

ensembles, especially the highly popular ones of the 1980s and 90s. However, "string" and "string combo" have fallen somewhat out of use as they have gained stronger historical associations and as Western-influenced songs use more diverse types of instruments. The terms "Thai pop" and "Thai song" can differentiate Thai-language popular music from Western pop, but they give little indication that the music has global influences. *Thai sakon*, on the other hand, suggests a type of music produced in Thailand with an overtly international stylistic orientation. Such an interpretation is how people in contemporary Thailand generally understand the term, and this study henceforth adopts *Thai sakon* as the generic category for the popular music examples that it considers.

Returning to the *Grove Music Online* characterization of *Thai sakon* that began this article, the genre does indeed reflect processes of Westernization and globalization that have a long history in Thai popular music. Furthermore, in the first decade of the twenty-first century, K-pop and J-pop became increasingly popular in Thailand, providing models for both musical performance and music industry strategies.[7] Yet, to invoke the sociologist Malcolm Waters (2001), this is not to say that globalization is "the substance" of *Thai sakon*.[8] To consider *Thai sakon* only as an example of subsumption into a generic East/Southeast Asian pop patterned after critically-maligned Western forms is to turn away from its musical details, which ultimately involve the sounds of hybridity more than homogeneity. While it does contain certain aspects of Western "light music" such as clear text declamation, moderate tempi, diatonicism, and pop-rock instrumentation, *Thai sakon* also shows evidence of both subtle and overt incorporations of traditional Thai musical features. Through the analysis of a variety of *Thai sakon* recordings from the 2010s, one can discern a number of identifiably Thai sounds that work across multiple aspects of musical performance. An examination of song lyrics provides a point of entry into a more detailed analysis of the musical characteristics of these recordings.

TRADITIONAL RESONANCES IN SONG LYRICS

Thai sakon exhibits several ways of relating lyrics to Thai traditions, one of which is the incorporation of references to classical stories. The song "I'm Sorry (Seeda)," released in 2016 by the band The Rube, invokes the national epic of Thailand, *Ramakien*. The lyrics depict the epic's male lead character (พระราม, Phra Ram or Rama) ruefully addressing the female lead character (สีดา, Seeda or Sita), with some narrative text from the *Ramakien* tale interspersed in accompanying vocal parts.[9] *Ramakien* is a distinctively Thai rendering of the wider Hindu-

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7. Mitchell (2012) remarks that "it appears now that J-pop has become the single most important influence on Thai pop music, replacing the earlier influence of Western genres" (207).
8. Writing about social theories of globalization in the 1990s, Waters stated that "globalization has become […] the central substance of contemporary culture" (2001, 184).
9. To give some sense of the scale of popularity for this and other Thai popular music hits, "I'm Sorry (Seeda)" reached 150 million views on YouTube within roughly two years of its 2016 release. This figure is more than twice the population of Thailand, only an estimated 20% of whom were internet users as of 2009 (Wuttipong 2012, 298). Even given how the "views" metric can be questioned, this is a remarkable degree of engagement for music that,

Buddhist *Ramayana* story, and the song works at multiple layers of specificity. Like popular music throughout the world, it presents the broadly relatable human phenomenon of a sentimental apology from a lover wallowing in his misdeeds (compare, for instance, North American pop singer Justin Bieber's own "Sorry" from 2015). At the same time, references to mythical battle in the territory of Langka and the iconic couple of Rama and Sita give some valence for potential audiences in South Asia and Southeast Asia who have their own, culturally shared versions of the *Ramayana* epic. But the narrative references are also detailed enough to be specifically relatable to a Thai audience; for instance, the lyrics at the end of the song refer to Rama faking his death to trick Seeda into returning to him. *Ramakien* features such episodes of mistrust between Rama and Seeda more than in other versions of the *Ramayana*. The reference to this episode in "I'm Sorry (Seeda)," along with the promise of reconciliation between the two characters, thus centers the song in the Thai rendering of the story.[10]

Ramakien factors into multiple contemporary Thai pop songs in addition to "I'm Sorry (Seeda)." The piece "Tua Rai Tee Rak Ter (ตัวร้ายที่รักเธอ)" ["The Bad Guy who Loves You"] is another example, which speaks from the perspective of the story's villain (ทศกัณฐ์, Tossakan, or Ravana in the Hindu *Ramayana*) about his unrequited love for Seeda. The band performing this piece, Tossakan, is named after this villain, conflating the singer and lyrical subject for the song. A 2016 piece by Sila Somnark entitled "Hanuman (I Miss you) (หนุมาน (ก็คิดถึง))" is sung from the perspective of Hanuman, the main assistant of Rama and a relatively more prominent character in the Thai version of the *Ramayana* story. The lyrics of "Praram Ok Hak (พระรามอกหัก)," ["Rama Heartbroken"] a 2016 single by Puen Seeprai, tell a story of a newly composed chapter in *Ramakien* in which the female lead character ends up choosing the villain over Rama. As perhaps the most recognizable and established story of Thailand, *Ramakien* is the most common choice of literature to be featured in popular song lyrics, although other classical sources can factor in as well. Following "I'm Sorry (Seeda)," The Rube released a series of three songs titled "Foe," "Fail," and "Fin," which make lyrical reference to the story of *Khun Chang Khun Phaen,* another traditional and established Thai epic.

Not all cultural references in *Thai sakon* are as immediately evident as the direct mention of classical literature. Some work more subtly in a more overtly Westernized context, complicating the binary distinction between Thai and Western. The song "Good Morning Teacher" by Chanakan Rattana-udom has verses in Thai and a chorus with lyrics entirely in English:

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unlike K-pop, has not generally witnessed a broad market beyond Thai audiences. Psy's pop juggernaut "Gangnam Style" reached one billion views in less than six months (Acuna 2012), but other K-pop hits of the 2010s garnered views more on the order of the top Thai ones (Billboard staff 2019).

10. See Cadet (1971) for an English language version of *Ramakien,* and Desai (1970) and Reynolds (1991) for a discussion of various *Ramayana* stories.

Good morning teacher, how are you today?

I'm fine. I'm okay. Better than our yesterday.

Morning teacher, how are you today?

I'm fine. I'm okay. Better now that you're away.

The song depicts an encounter in which a man runs into his old lover long after their hurtful breakup. He expresses being better off after the split and thankful for the lessons she gave him about love, addressing her as "teacher." In a type of situational code switching, in which "a change in linguistic form represents a changed social setting" (Nilep 2006, 8), the chorus signals the formal environment of a classroom, hence the loss of a close relationship.[11]

While it may seem counterintuitive and though the two processes are not mutually exclusive, the English-language chorus is more of an inward-facing Thai reference than a homogenizing move toward the common language of global pop. "Good morning teacher, how are you today?" is one of the first sentences taught in English lessons in schools in Thailand, and it is usually followed by "I'm fine thank you, and you?" It is such a common greeting tradition that it has become a representative English sentence for Thais. According to Rattana-udom in an interview, he intentionally included this phrase thinking that most people would be able to "tune in" to it since "most Thai students should have said this phrase to an English teacher" (Rattana-udom 2018).[12] People validated his strategy in the comments section of the song's music video on YouTube, where they expressed how they were happy to be reminded of their childhood by the phrase. In this way, "Good Morning Teacher" shows how even songs with an especially Westernized presentation can convey Thai aspects of daily life.

Another lyrical characteristic in *Thai sakon* that connects to traditional Thai artistic approaches involves the use of rhymes. While external rhyme schemes such as couplets feature in popular styles across the globe, the type of rhyming known as *klon* is more specific and what Thomas Hudak has referred to as a "true Thai form" of poetry (1990, 14). *Thai sakon* sometimes invokes this traditional form. In a stanza of *klon*, there are two *baat*s, and each *baat* is made of two *wak*s. The number of syllables in each *wak* varies depending on the subcategory of *klon*, but the general rule of rhyming is similar across the different subcategories. The song "Khon Mee Sanay," for example, is an especially popular 2016 hit by Nakarin Ginsak that follows the structure of *klon 8*, the most common type and one with a

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11. Of interest for the present analysis is that in their foundational work on code-switching, Jan-Petter Blom and John Gumperz define "situational switching" based on how Norwegian teachers use different linguistic codes in the classroom, with one for "formal lectures" and another for "open and free discussion" (1972, 424). We would like to thank the anonymous reviewer who suggested interpreting this passage in terms of code switching.
12. Translation by Teerapaun Tanprasert.

long history in the literary culture of Thailand (Makjaeng 1992).[13]

The brief consideration of lyrics above suggests a different picture of *Thai sakon* than one of wholesale Westernization and complete allegiance to the present. Although the music is indeed immensely popular—"Khon Mee Sanay" had more than 200 million views on YouTube within two years of its release—this popularity goes along with the incorporation, rather than the mitigation, of distinctively Thai stylistic elements. A careful listen to various musical aspects of recorded performances further textures this picture, in which overtly and broadly palatable pop music can be heard to carry significant traditional and regional traces. In what follows, analysis of instrumental practices, language-melody relationships, and expressive vocal approaches bring to light some of the roots-oriented musical principles at work.

INSTRUMENTAL HYBRIDIZATION AND TRANSLATION

The accompaniment for most *Thai sakon* consists of Western rock band instruments such as acoustic and electric guitar, keyboard, electric bass, and drums, with some variance across musical styles. However, some extremely popular songs also use Thai musical instruments, including the song "I'm Sorry (Seeda)" which topped several charts and won multiple awards.[17] According to the official description provided with the music video in YouTube, the song falls within a category of "Modern Traditional." Though the band consists of a vocalist, a guitarist, a bassist, and a drummer, the first twenty seconds of the song are purely instrumental, led by a Thai classical stringed instrument, *saw u* (ซออู้, a type of spike fiddle) and accompanied by the sound of Western orchestral strings.[18] Another classical instrument, *ranat ek* (ระนาดเอก, a type of xylophone)*,* makes an appearance later in the song (1:55–2:05) and is played responsorially between each vocal line, with heavy drum kit playing anchoring the rhythmic texture. Both *saw u* and *ranat ek* are instruments used in classical ensembles such as *piphat* and *mahori* to accompany formal plays, rituals, and ceremonies. This

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13. Left open for further discussion is the question of how such incorporation of traditional Thai poetic strategies corresponds to particular types of Thai popular music. Mitchell writes that these strategies "require great skill and their use differentiates *luk thung* from both songs for life and *string,*" the latter of which is likely to follow Western pop in its use of external rhyme (2015, 103). Myers-Moro (1986) cites a 1961 study of contemporary Thai poetry referring to *klon* as the "most used" form in both traditional and modern song lyrics. She notes that lyrics in the songs for life genre follow *klon*'s external rhyme scheme loosely (as "Khon Mee Sanay" does), or "in some cases, employ no external rhyme at all," while they are rich in internal rhymes (Myers-Moro 1986, 107). Wuttipong, conversely, observes that Thai indie music of the mid-1990s kept some aspects of external rhyme while reducing internal rhyme (2012, 227).

17. "I'm Sorry (Seeda)" ranked 5th on the *Seed Chart Top 20* on June 5, 2016 (ranked by total play counts in 40 national radio channels) and 94th on *EFM94 Top Air Play 94* on April 16, 2016. It won the Best Rock Song Award of the Year at the *Joox Thailand Music Awards* on March 23, 2017, and it won the Song of the Year Award at the *10th Nine Entertain Awards* on June 18, 2017.

18. The verse section that follows this *saw u* introduction contains aspects of Western soft rock style as well as instrumentation, as heard in the opening minor seventh chord, the rim clicks on the snare, and the distinctive upward-resolving I^{maj9} chord. Joti Rockwell notes that this chord evokes the beginning of Chicago's 1976 international hit "If You Leave Me Now."

song, however, uses them along with Western instruments, creating a hybrid soundscape that mirrors the lyrical approach to classical references.

While "I'm Sorry (Seeda)" is one of the more commercially successful songs from the 2010s to explicitly incorporate classical Thai instruments, it is not exceptional in doing so. "Bon Lok Nee (บนโลกนี้)," the 2016 single by Nawapon Rodsomjit, mixes the sounds of acoustic guitar with *ranat ek* as an instrumental accompaniment throughout the entire piece. Though *ranat ek* is one of the most sonically recognizable and common Thai classical instruments to be featured in pop songs—it is a lead instrument in *piphat*, the elevated and courtly traditional ensemble of Thailand—other instruments appear as well. *Saw* fiddles, which factor into a large variety of Thai folk and classical traditions, are prevalent across a wide range of Thai popular music genres, including Isan-based rock and indie music.[19]

Several Thai instruments appear in "Dung Fan Chan Dai (ดั่งฝันฉันใด)," a 2010 single by Klear that includes *khim, boeng mang kawk,* and *saw duang*. The song begins with a prelude featuring virtuosic flourishes played on a *khim* (ขิม), a hammered dulcimer with Chinese origin, and *boeng mang kawk* (เปิงมางคอก) drums, which are part of *piphat mawn* (Mon) ensembles and relate to the *pat waing* tuned drums of Myanmar. After this prelude, the song proceeds by introducing *saw duang* (ซอด้วง, a higher-pitched relative of *saw u*) accompanied by piano. Both *khim* and *saw duang* are also used more subtly alongside piano, acoustic guitar, and band instruments throughout the piece. That this song and the other examples above range across multiple styles, including rock and balladry, suggests that the idea of incorporating the sound of Thai classical instruments has not been circumscribed by a particular genre such as "modern traditional" or "folk pop." Instead, the idea reflects a more widespread and flexible phenomenon that continues to evolve in Thai popular music.

While traditional Thai instruments sometimes have a direct presence in Thai pop music, their sounds also appear through idiomatic imitations of them on more globally widespread instruments. This process of "instrumental translation" involves certain aspects of music played on one instrument being adapted or adopted for another.[20] Though often subtle and a matter of analytic interpretation, such approaches are readily heard in Thai popular music, and they recall Prasidh Silapabanleng's communication to David Morton about music being performed on Western instruments similar to Thai ones during the early history of *Thai sakon* (Morton 1976, 16). An idiomatically adapted translation can be achieved through multiple means, including the transference of melodic phrases, timbral effects, rhythmic approaches, or gestural techniques common to the imitated instrument. Such translations range from clear parallels in which both instruments exist in the same performance and play different versions of the same melody, to subjective correlations in which traditional performance techniques

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19. We would like to thank the anonymous reviewer who called this to our attention.
20. See Rockwell (2018). Hansen (2010), in analyzing this phenomenon in the music of Tōru Takemitsu, refers to it as "instrumental imitation."

Example 1. *Saw u*/electric guitar translation in "I'm Sorry (Seeda)."

Example 2. *Khim*/electric guitar translation in "Dung Fan Chan Dai."

can be heard on more modern instruments through informed and interpretive listening. These techniques then comprise a type of instrumental "accent" on the translating instrument.

In both "I'm Sorry (Seeda)" and "Dung Fan Chan Dai," the electric guitarist plays a translated version of a melody previously played in the same song by a traditional Thai instrument. In each case, the moment happens toward the end of the performance when a cumulative textural buildup (see Spicer 2004) has led to a timbrally saturated "rocking out" section. Examples 1 and 2 give transcriptions indicating the melodic correspondences in both recordings. In the first case, the melodies are identical, save for the microtonal inflections of the *saw u* (especially the B♭3 at the beginning), the tempo, and the endings. In the second case, the electric guitar line sounds as a more rhythmically forceful, on-beat rendering of the first part of the earlier *khim* melody without its return to E5. This melody itself came near the beginning of the piece as part of a call-and-response section in which the *khim* imitated the vocal line.

Part of the process of translation suggested by the analysis of "I'm Sorry (Seeda)" and "Dung Fan Chan Dai" involves a change from a Thai tuning idiom to the 12-tone equal temperament of a fretted electric guitar. The *saw u* B♭3 of Example 1 occurs with vibrato, and judging by Sonic Visualizer analysis, it wavers around ~238 Hz, or ~36 cents above B♭3 (233 Hz). This is not to be taken as evidence for "equiheptatonic" or 7-TET tuning, which would correspond to 171.4 cents below a presumed 12-TET C-tonic, or 28.6 cents above B♭3. More significant than this minor pitch discrepancy and the single, vibrato-infused data point is that

seven-fold equidistant tuning is a theoretical ideal discussed by Morton (1976, 22) and others but not precisely realized in practice, even on fixed-pitch instruments (Garzoli 2015; Rahn 2019). However, this second note of the song gives an early indication to listeners that an approach other than equal temperament is in play, and perhaps one in which scale steps fall in between 12-TET half steps and whole steps.[21] The subsequent electric guitar line, though it does include some slides and string bends, does not rearticulate this B♭3. Likewise, in "Dung Fan Chan Dai," the second note of the recording (occurring prior to the music in Example 2) is a B5, from which the *khim* cascades downward during its introductory flourish. While the opening A5 is ~880 Hz, this B5 is ~982 Hz, or ~10 cents below a 12-TET B5. Again, what sounds like a step away from a tonic scale degree is between 100 and 200 cents from it, and the later guitar line essentially falls within 12-tone equal temperament.

Thai musicians have a history of imitating and incorporating musical idioms from surrounding areas. David Morton notes that during what he refers to as the "classic" period of Thai music between the late 1800s and 1932, composers "frequently used [melodies] borrowed from neighboring cultures—Chinese, Burmese, Javanese, Khmer or Cambodian, Môn, Laotian, and possibly India" (1976, 15). In Thai classical music, such borrowings appear in titles of pieces and reflect the idea of *samniang* (สำเนียง, "accent" or "tone"), in which Thai melodies can have "accents" referencing regional styles. Myers-Moro (1993, 74-79) outlines twelve of them, and Miller (2010) focuses on how the one called *samniang jin* ("Chinese accent") relates to Chinese music. They have scalar associations, such as the hexatonic content of Môn-style works, and possible implications for tuning as well (Kanchanapradit and Meesawat 2014). What they generally share is pentatonicism, since some use five tones exclusively while others use a sixth or seventh tone very sparingly. This commonality suggests that anhemitonic five-note melodies, in combination with other factors, can serve as a multi-regional signifier of Thai traditional music. Though anhemitonic pentatonic scales are common across world musics and are thus cannot settle matters of stylistic provenance on their own, in the context of Thai popular music, "Thai-ness tends to be maintained by the use of a pentatonic scale" (Ware 2011, 88). Due to people's experiences and associations with various Thai-sounding pentatonic melodies, popular songs such as those of Examples 1 and 2 can sound familiar by utilizing pentatonicism. Some *Thai sakon* songs use pentatonic melodies along with the interpretative reproductions of other stylistic elements of a Thai instrument such as phrasing and performance techniques, resulting in a discernible instance of translation in which a Western instrument contains a kind of instrumental accent rooted in Thai musical practices.

An example of this idea occurs in "Khon Mee Sanay." The song features rock band accompaniment (also seen in the music video and when performed live) with an electric guitar, an electric bass, and a drum set. The song's introduction (see Example 3) features an

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21. Along these lines, Rahn concludes that the tunings he analyzed from Charoensook et al. (1997) "do not manifest a clear pattern of smaller and larger 1-step intervals. Accordingly, one can re-interpret the 'equi-' prefix of the term 'equiheptatonic' that has been applied to Thai tunings as conveying a lack of patterning among the tunings' steps" (2019, 11).

instrumental part played by an acoustic guitar that resembles, in part, the sound and playing techniques of *phin* (พิณ), an Isan instrument that is common in *luk thung* (Mitchell 2015, 24 and 192-93). *Phin* and guitar, as plucked chordophones, have some similarities in construction, although a *phin* has two to four strings (most commonly three), is tuned with fourths and fifths and is fretted diatonically rather than chromatically (Miller 1998, 316; Sumrongthong 2008). In this passage, a Thai instrumental accent resonates in the guitar part as a result of hammered-on notes, short melodic phrasing played on two strings, and ascending contour that returns to a tonic drone on the lower string. The melody also foregrounds a pentatonic scale, which in this case is major as opposed to the minor pentatonic characteristic of *phin* performances.[22] Even though the connection to *phin* playing is brief and subject to interpretation, the beginning of "Khon Mee Sanay" nonetheless contains aspects of a Thai folk-inflected approach to the six-string acoustic guitar.

Other Western instruments can echo Thai instrumental idioms as well. "Buppesannivas (บุพเพสันนิวาส)," the main theme of a 2018 drama with the same name, sung by Sarunyu Winaipanit, presents another example of the idea of instrumental translation. The first instance in the song occurs at the very beginning (0:04–0:07), with a keyboard string part that imitates the timbre and melodic approach of *saw u*. This string sound is digitally synthesized, perhaps with a violin setting, and the effect of playing it on a keyboard with this particular range and tempo is the calm and contained sound quality that classical *saw u* playing produces. Many Thai musicians describe the *saw u* as having an "ooh" sound (Miller 2010, 127), rather than the varied spectral range of other vowels, and Myers-Moro (1993, 94) notes the overall emphasis on low-register, "first position" *saw u* playing in classical string (*khrüang sai*) ensembles. The pitches in the "Buppesannivas" introduction range between E3 and C4, which

Example 3. Guitar introduction to "Khon Mee Sanay."

22. The celebrated performer Thongsai Thapthanon plays a two-stringed *phin* tuned in fifths. Though the diatonic fretting roughly corresponds to a dorian scale with the lower open string as tonic, he mostly (though not exclusively) avoids the first fret, resulting in minor pentatonic playing-what Miller (1998, 323) identifies as a *yao* scale. The tuning is commensurate with that of the *khaen* (Northeastern Thai/Lao free-reed mouth organ) and is closer to Western diatonic steps (Miller 1998, 322) than equi-heptatonicism, which would offer no distinction between major and minor pentatonic.

focuses the timbre and distinguishes the part from a melody that a violin would play. This tessitura, coupled with how this excerpt navigates a major pentatonic scale, creates an overall musical feel comparable to that of *saw u*.

The other sound suggesting instrumental translation in "Buppesannivas" comes in the form of a piano played in the manner of a *ranat ek*. As a keyed percussion instrument struck by padded hammers, the piano has the ability to sound like a *ranat ek* played with soft mallets. Classically, *ranat ek* performers play melodies using even rhythms and doubled octaves, and they can sustain notes through a tremolo octave technique.[23] In "Buppesannivas," the piano references these approaches to instrumental performance by interspersing pentatonic doubled-octave melodies throughout the song. These melodies contrast with its otherwise chordal, lower-register accompanimental playing, and at certain points in the piece (such as 1:33–1:37), the octaves are slightly asynchronous, calling to mind the beginning of a tremolo octave. The piano melodies play a similar role to those of the *ranat ek* that is also featured in the recording, since they play in the same overall register, use a ♪♪♪♪ rhythm, and appear in between sung phrases. Instrumental translation thus provides a means by which a Thai sound can emerge from Western instruments playing *Thai sakon*.

THAI LANGUAGE AND MELODY

Since Thai is a tonal language, all music sung in Thai carries melodic implications from the lyrics. Standard Thai has five speech tone marks: low, mid, high, falling, and rising (Example 4). As the names suggest, the first three are static and the latter two are dynamic tones (Abramson 1962, 9). Since a change in tone can change the definition of a word, Thai lyrics and a song's melody should have some correspondence for the lyrics to be intelligible and the melody to sound natural. For example, these principles explain problems with Thai translations of Disney songs. In the Thai version of "Let It Go" by Wichayanee Pearklin, the first word is "hi-ma," which means "snow." In the Thai language, "hi" has a low tone mark while "ma" has a high tone. Even if "ma" is assigned a relatively higher pitch, it is still possible for one of the syllables to sound like a mid tone if the intervallic difference is too narrow. But the first two notes of "Let It Go" are both sung as C4, and the piece thus begins with the singing inherently sounding forced. Despite attempts to fit in words without changing the melody, translated songs such as these can end up sounding unnatural with lyrics that are difficult to understand. As a result, Thai-language songs require a reasonably close association between Thai speech and melody, and there are limits on the extent to which a *Thai sakon* melody can be Westernized.

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23. Called *kraw*, this tremolo technique, often involving octaves, is credited to the famous musician Luang Pradit Phairoh (Ketukaenchan 1989, 108; Wong 2001, 185).

Tone	Example	Abbreviation
Low	à	L
Mid	a	M
High	á	H
Falling	â	F
Rising	ǎ	R

Example 4. Indications for the five Thai tone marks.[24]

Existing scholarship addressing melody and speech tone within Thai music suggests that the level of coordination between the two parameters is higher in traditional music than in contemporary popular music. However, this level seems to depend upon the particular genres in question, and there is as of yet no consensus on the degree to which popular music forsakes a coordinated approach. In an early study by George List (1961), the two popular songs he analyzed showed only 59 and 60 percent coordination between speech tone and melody—the lowest two percentages of the eight examples he studied (the other six included recitations, lullabies, and a classical song). Such a result is perhaps an indication of Westernized popular music of that time period being relatively forgiving of pitch-tone mismatches, although it is hard to know without more repertoire and context for comparison. In contrast to List's article, Wing See Vincie Ho (2006) analyzes a 1990s recording by Mos Patiparn that exhibits a relatively close correspondence—roughly 80 percent—between speech tone and melody, which complements the Cantopop-focused findings of the study.[25] Despite this correspondence for the one example, citing her earlier work as well as a 1999 study by Mary Saurman, Ho observes that melody-tone mismatches are apparently more prevalent in contemporary pop songs (those of the 1990s, presumably) than earlier, more traditional Thai songs. This view concurs with other general observations about late twentieth- and early twenty-first-century Thai popular music. Nalin Wuttipong notes that from what she marks as the "Pre-pop Era" (1960s–1982) to the "Pop Era" (1982–1994), the correspondence was close, whereas during the "Indie Phenomenon" (1994–1997) it "became slightly reduced" and has remained that way (2012, 217-19). Vicki-Ann Ware mentions how the correspondence is perceived as markedly less in Thai pop than in *dontri Thai prayuk*, a hybrid

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24. The symbols for tones and the conventions for romanization in the following analyses are based on the "T2E" system, which is used by the website thai2english.com and is relatively easy to follow for English readers. The system fails to distinguish between certain vowels, but since this study is concerned mainly with the tone of each syllable, such a flaw is negligible for the present purposes. See Chris Pirazzi's website https://slice-of-thai.com/language for a candid discussion of various romanization systems.
25. Ho's (2006) Figure 22, which transcribes the opening vocal line of the song, appears in C-major rather than D-major (see Myers-Moro 1993, 143 on this practice), and it rhythmically normalizes the end of the excerpt. Regardless of the notated key, the melodic contour of the transcription is in keeping with Mos's vocal line and is consistent with Ho's methodology, which focuses on relative rather than absolute pitch.

genre fusing Western pop and Central Thai classical music:

> [...] in Thai pop music [...] there is little agreement. Many older Thai musicians complain about the lack of correspondence between tone and melody in Thai pop. This divergence from traditional Thai melodic structures and convergence with Western practices perhaps signals a desire amongst the young to identify more closely with a global culture than to maintain what they perceive as 'outdated' traditional Thai practices. (Ware 2011, 89)

To add more detail to the question of melody-speech tone agreement in Thai popular music, the following analysis examines this relationship in two songs from 2015 and 2017 that represent different artists and styles. The present approach is in keeping with D. Robert Ladd's (2013) concept of "structural effects"; that is, pitch approaches within text-setting processes as opposed to "phonetic" effects such as duration or vowel quality. The pieces listed in this article's discography, generally speaking, seem to have a high degree of pitch-tone coordination. Among them, the two we selected for detailed analysis are the most stylistically Westernized in terms of instrumentation, rhythm, and harmony. In principle, they thus have high potential for mismatches between language and melody.

The analytic method used here first identifies the correct tone for each syllable, then compares it against the tone the singer follows based on the direction of pitch change between every consecutive two notes (as well as possibly the pitch contour within a syllable, in cases of dynamic-tone syllables). The syllables without a fixed tone, such as an exclamation sound and the syllables commonly spoken as short and unstressed, are automatically treated as tonally correct. The criteria for matching are intuitive for the three static tones. If the pitch remains the same or changes in the opposing direction when the linguistic tone changes, the moment is counted as a mismatch, and vice versa. For the two dynamic tones, matching melodies are achieved either by the correct direction of the contour of the syllable or the implied contour created when the direction of the change between the concerning pitch and the preceding or the following pitch is identical to the contour of the syllable.[26] As a native Thai speaker, Teerapaun Tanprasert also cross-checked the excerpt with the stated general rules to confirm that every syllable that sounds tonally incorrect is marked as such and vice versa. The lyrics below the staff in Examples 5 and 6 indicate the tones using the symbols from Example 4.

The analyses below use the alphabetic abbreviations from Example 4 to indicate tonal mismatches. Unstressed syllables, which are excluded from the mispronounced syllables count, are marked with "US" above the note on the same plane as the alphabetic abbreviations. These are in green, which is the color code for exceptions where the syllables are pronounced as they would likely be in daily speech as opposed to textbook rules. The

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26. Ketkaew and Pittayaporn (2014) treat non-opposing and parallel transitions as separate categories. They also conclude that non-opposing transitions are acceptable in Thai pop music (165). However, since non-opposing transitions can also reduce the intelligibility of the words, both non-opposing and opposing transitions are considered tonal mismatches for this study.

other colors mark proper mismatches, with the first letter representing the correct linguistic tone and the latter representing the melodic tone produced by the singer. The blue color represents a mismatch in which a static-tone syllable is pronounced as another static tone, and orange represents a mismatch in which the dynamic syllable is accompanied by only one note and the correct tone is not implied through its position relative to the neighboring syllables.

Example 5 provides an excerpt of a sung-rapped section (0:50–1:13) from "Sayonara," a 2015 pop song by MILD. In total, there are eight significant tonal mismatches and eleven unstressed syllables among the 84 syllables (roughly 90% matching, not counting the unstressed syllables). Even within this relatively low ratio of speech-melody conflicts, there is a noticeable pattern that helps explain their existence. The three dynamic-tone syllable mismatches (orange) are all falling tones pronounced as a static tone. This is in agreement

Example 5. The first sung-rap section in "Sayonara" (0:50–1:13) with tone-marked lyrics. Green = unstressed syllable; Blue = static-tone mismatch; Orange = dynamic-tone mismatch.

with Ho, who proposes that this may be seen as a "delay in the realisation of the falling contour" (2006, 1421). The other five mismatches involve compromising the distinction between the mid and the low tones at ascending leaps. The unstressed syllables are all made of the short /a/ vowel (สระอะ) and are glossed over rather quickly. On the other hand, the parts that do match are closely aligned and highly coordinated. For instance, the last five syllables in the first line match their tones perfectly despite the pitch change between every two notes. The sequence starts with the highest pitch, then moves down one step to a falling tone and continues down to the mid and low tone consecutively before moving back up, corresponding to the high-tone syllable. The last line of the transcription also shows a pitch correspondence that is likely not coincidental: all of the G3 pitches correspond to a mid-tone syllable. As for the rest, "jèp" and "bpùat" are both low-tone words, and they correspond to a drop in pitch. "Rûat" has a falling tone, and it is sung with a falling contour from G3 to D3. "Raow" has a high tone, so the pitch rises to B3. Therefore, the tonal correspondence between speech and melody for this excerpt is nearly perfect. Despite the fact that the recording clearly draws from Western popular music, and perhaps because rap is more of a speech-oriented mode of vocal delivery, the melodic approach in "Sayonara" is distinctively honed for the Thai language.[27]

The second example is an excerpt from "Good Morning Teacher" by Chanakan Rattana-udom (see Example 6). This song stands out as a Westernized example for its jazz- and soft rock-inflected harmonic idiom as well as the chorus's English lyrics discussed earlier in this article. Unlike the nearly monochordal triadic arpeggiations of Example 5, this song has a largely pentatonic melody that departs slightly from this frame in accordance with the underlying harmony.[28] Among the 85 syllables in this excerpt, only nine exhibit a conflict between speech tone and melody (i.e., roughly 89 % matching). The proportion of language/melody conflicts is low—remarkably close to that of the previous example—and the main pattern explaining these incongruities is easily noticeable. Resembling the pattern in "Sayonara," five of the six dynamic-tone mismatches are falling tones pronounced as low tones, and all of the static-tone mismatches are the interchanged uses of mid and low tones. However, the two exempted mismatches do not involve short /a/-vowel syllables. Instead, they both occur when a rising tone is sung as a high tone, a practice commonly done in actual Thai speech. This practice can be thought of as skipping the starting (lower) pitch and pronouncing only the final (higher) pitch. While such bypass can reduce the intelligibility for some rising-tone syllables, the two that appear in this excerpt are both highly common in speech.

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27. See Manabe (2006) for a study of Japanese-language approaches to rap, featuring repertoire besides American rap and hip-hop to which this song also relates (at 2:23, this song features the lyrics, sung in English: "Sayonara Japanese goodbye"). In Manabe's study, analogous questions of maintaining lyrical coherence within a non-English language arise, though more in the domains of rhythm and rhyme than in tone and pitch.

28. The maintenance of a pentatonic melody over varied chord changes does not distinguish Thai popular music from Western pop and rock (see Temperley 2007). However, the B3 in m. 7 of Example 6, as a departure from pentatonicism and a reinforcement of a IV^{maj7}—I^{maj7} progression, clearly show this recording to be connected to Western light rock. These "frozen" major seventh chords, as Walter Everett calls them, "became a pervasive staple of soft rock in the 1970s, as with Carole King, Carly Simon, and Todd Rundgren" (2000, 315).

Example 6. The first verse of "Good Morning Teacher" (0.27–1.23) with tone-marked lyrics.

The excerpt in Example 6 presents a case where a changed pitch can correspond to the syllables of the same tone without sounding unnatural. This moment occurs at the beginning, with the 4th and the 5th notes on the syllables "mee" and "ter." They are both mid tones, but even with one whole tone's difference, they can both still successfully register as such. This is possible since the mid tone is the most flexible speech tone in everyday speech, since the musical pitch difference is small, and since the two pitches of D4 and C4 are clearly in the middle of the pitch range for the vocal phrase in question. As for the well-matched parts, the phrase "dâai bòt rian sùt táai" is a good example. The first syllable is a falling tone, and it is followed by a lower pitch on "bòt," a low-tone syllable. "Rian" is a mid tone, so it is higher than "bòt." "Sùt" has a low tone, so it is back to the same lower pitch as the previous low-tone syllable. Finally, "táai," a high-tone word, is matched with an ascending leap of a fifth from the previous pitch. In sum, this passage from "Good Morning Teacher," as with the former example, demonstrates a significant correspondence between speech tone and melody.

While not all tones and pitches are perfectly aligned in the above examples, there are very few mismatches, and the ones that do occur follow patterns (e.g., singing a falling tone as a low tone) that minimize the effect on intelligibility and avoid semantic ambiguity. In Murray Schellenberg's study on the relationship of speech-tone and melody across world cultures that use a tone language, he concludes that "when things are not equal, music 'trumps' language," based on the finding that "the literature on singing in tone languages is filled with examples of melodic mismatches that simply cannot be explained by linguistic rules" (2012, 275). However, the agreement in the above examples suggests that music does not completely "trump" language, even for instances in which borrowings of Western musical styles are at their most pronounced. Yoko Tanese-Ito's (1988, 132) study on Thai court songs shows vocal melodies to be constrained by the relationship between them and speech-tone, which hints at how much the preservation of the language's tonal characteristics appears to be in play across a variety of sung Thai musics.[30] Nitipong Honark, the renowned pop music composer, notes in his book on compositional techniques that it is important to be aware of the tonal qualities of both the lyrics and the melody and to avoid conflict with them, as the melody could reduce the intelligibility of the words (Ketkaew 2015, 1 and 121).

Since *Thai sakon* includes more diverse vocal melodies than those found in royal court songs, and since its repertoire is not entirely free of tonal mismatches, it would be excessive to claim that melody in this music is entirely defined and restricted by the language's tonality. Instead, the results of the above analysis show melody and language to be mutually constrained and more tightly interwoven than one might expect from songs whose music can simply appear Western while the lyrics are in Thai (and, for that matter, include some English lyrics). Further detailed analysis of Thai popular music, especially that which is attentive to what kinds of mismatches actually cause semantic ambiguity, could test the assumption that more modern, pop-oriented music is likely to have relatively looser correspondence between speech tone and melody. Such a view may have more to do with the subjective valuation of newer/unfamiliar versus older/familiar music than with the actual singing of particular words using particular pitches. Whether intuitively or intentionally, composers and singers of Thai popular music must take into account the musicality of the Thai language in conjunction with their varied stylistic musical approaches.

VOCAL STYLES AND TECHNIQUES

In addition to aspects of the language itself, Thai traditional singing has a few unique characteristics that are markedly different from contemporary global singing conventions. Some of these approaches are clearly heard in *luk thung* music, and such aspects of

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30. As for instrumental music, David Morton writes: "It is not known when the practice of separating the vocal from the instrumental music occurred with the Thai, but it is highly likely that it was when they were still inhabiting southern China (prior to about 1250). The requirements of a tone language limit the melodic possibilities, and the freedom of the instruments would be greatly restricted if they accompanied the vocal line. For this reason, I was told by several Thai musicians, the separation was made" (1976, 216-17).

vocalization and melodic ornamentation appear in more subtle ways within *Thai sakon* as well. The two characteristics considered in detail below involve timbre and a style of melismatic vocal expression called *uan.* While Western influences have brought about much in the way of rhythm and instrumentation for *luk thung*, traditional timbral approaches and aspects of *uan* are still present in the singing to varying degrees. On the other hand, in Thai pop drawing strongly from Western pop, rock, and R&B, classical-style timbres and *uan* are relatively uncommon although they can be heard.

In the context of Thai traditional singing, *uan* refers to the "wordless vocalisation which is positioned between sung words" (Swangviboonpong 2003, 32). John Latartara defines it as follows: "*Uan* is used to expand a piece's text to fit the music and is considered the heart of Thai classical singing" (2012, 89). Thai classical vocalists can include lengthy melodic phrases consisting entirely of *uan* and constituting entire sections of music.[31] However, *uan* can also be used more concisely as ornamentation between words or phrases, which is how it apparently functioned in the Ayutthaya period and earlier with "wordful" or non-melismatic music (Swangviboonpong 2003, 33).[32] Even though long, traditional *uan* as sung in classical Thai music is rare in *Thai sakon*, it has maintained a subtle presence in this repertoire through its adaptation into aspects of ornamentation.

With regard to timbre, Dusadee Swangviboonpong (2003) notes that traditional Thai folk songs and classical singing share a "held back," controlled sound that differs from the more open and projected approaches of popular styles such as *luk thung* and Western pop. He references his teacher, Charoenchai Sunthornwathin, as saying that singers should feel vibrations in their chest, and he notes that in general, Thai classical singers prefer "a nearly closed-mouth technique with almost rigid lips, particularly when singing *uan*" (Swangviboonpong 2003, 19–20). These descriptions correspond to a relatively dark, acoustic timbre in which formant frequencies are relatively low (Titze 2001, 525), compared to the brighter "resonant" or "belting" styles of popular singing in which perceived sympathetic vibrations are in the head (Heidemann 2016, 3.22) and formant frequencies are relatively higher (Björkner 2008, 539). Though these general distinctions can be made in terms of the overall vocal approach to different genres, it is important to bear in mind that the spectral characteristics of Thai classical singing vary based not only on the individual singer but also on the phoneme used, with the two principal *uan* vowels of /e/ (as in "her") and /ou/ (as in "could") being relatively bright and dark, respectively (Latartara 2012, 93).

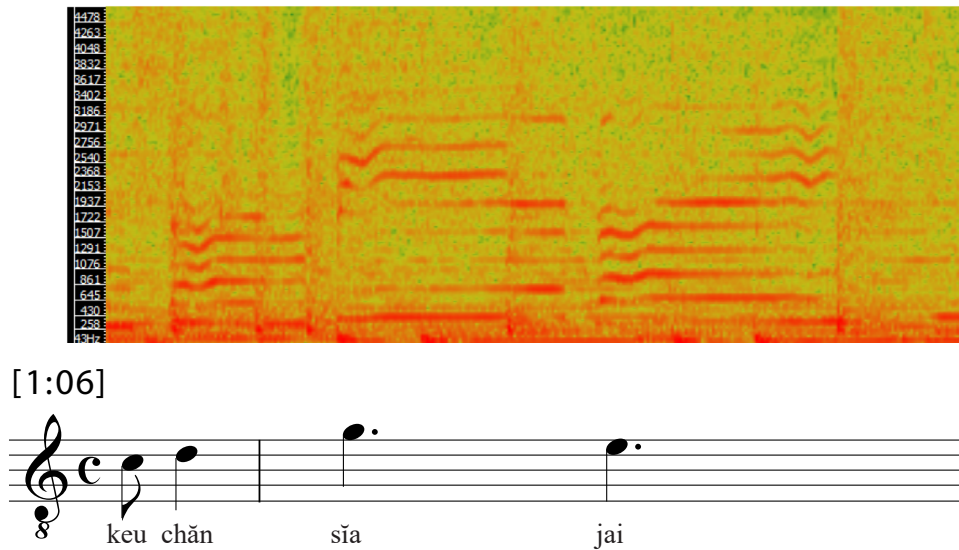As a further qualification, it is worth noting how wordless vocalization is not limited to

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31. Listen, for instance, to the rendition of the traditional song "Lao Duang Duen" by the famous singer and teacher Charoenchai Sunthornwathin, as well as the more modern version by Duangporn Pongphasook (links given in this article's discography). In the latter recording, roughly the first 25 seconds of the song consist solely of *uan*. Compare also the *luk thung*-style version of the song by Chinakon Krailat, discussed in Mitchell (2015, 49–50).

32. Tanese (1980, 181) notes how short *uan*, inserted ornamentally after a word and known as *uan sot sek*, is used in Thai folk songs as well as classical singing.
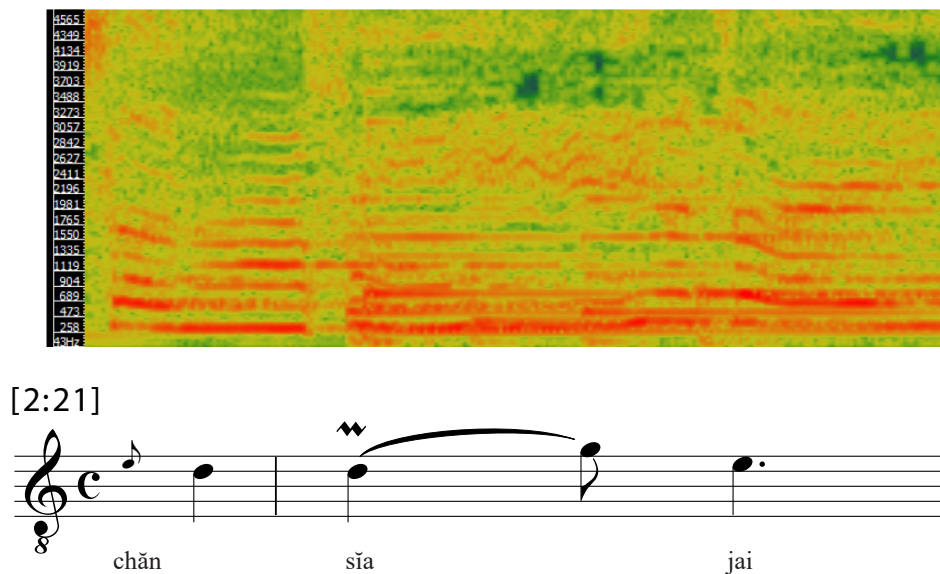
Thai singing. American R&B singers such as Alicia Keys also sing melismatic "runs," and this stylistic approach itself has an influence on Thai popular music. Although the practices can sound similar and both often involve conjunct pentatonic motion, *uan* is more strictly pentatonic, has a narrower tessitura, and features the comparatively "held back" timbre discussed above. This distinction can be heard in a "Lao Duang Duen" performance by Lydia Sarunrat, a Thai R&B singer, on the TV show *The Mask Singer (Season 2)*. Her usual singing style is that of a Western R&B singer, but she mainly keeps to classical-style singing in this performance, thus "masking" her more easily identifiable vocal identity. For the majority of the song, her voice has many features of polished traditional singing, with a constrained pentatonic scale, subtle vocal breaks and ornaments, and a relatively closed timbre. However, during a section from 2:56–3:27 in which she imitates the high-register playing of the *khlui* (ขลุ่ย, a vertical duct flute), she ascends into a "whistle" upper range that evokes the R&B-pop singing of Mariah Carey. Also, during a brief vocal run around 4:56, Lydia turns toward her more typical R&B style by moving outside of the overall B♭ major pentatonic scale with an E♭, as well as a blues third in between D♭ and D. After this melodic flourish, she returns to singing *uan* as she did at the beginning of the song, and the performance concludes. Lydia's singing illustrates the distinction between Thai wordless vocalization and Western vocal runs. It also shows how they overlap and can be combined within one song in a popular music performance context.

As with Lydia's performance on *The Mask Singer,* the incorporation of traditional vocal techniques in pop songs usually appears in deliberately hybrid songs, accompanied by the use of some classical or folk instruments. In "I'm Sorry (Seeda)," Siwapong Hemwong's singing style follows rock or pop/rock conventions for most of the piece, but at 1:57, his singing abruptly switches to a traditional vocal approach. In this case, the adoption of this style lasts only a few seconds. However, since the part mirrors the first sentence of the earlier two choruses, with the same lyrics and a slightly modified melody, it presents a good example for comparison. The following analysis examines aspects of timbre and *uan* for the comparable passages in the song.

The spectrograms of the first three words of both parts (see Examples 7 and 8) illustrate how the latter, more traditionally oriented version highlights fewer high-frequency overtones, in keeping with the "closed" timbral approach discussed above. The two versions of "chan,"

[1:06]

keu chăn   sĭa   jai

Example 7. Spectrogram of the first three syllables of the first chorus of "I'm Sorry (Seeda)."[33]

[2:21]

chăn   sĭa   jai

Example 8. Spectrogram of the first three syllables of the last chorus of "I'm Sorry (Seeda)."

both sung on the weak beat, sound timbrally similar with a fairly wide spectral range. For the syllables "sia" and "jai," though, the timbral differences are more readily apparent. Both syllables start off fully on the consonants, showing a wide range of partials, after which the former version becomes relatively more resonant and the latter more closed with regard to the upper frequency ranges.
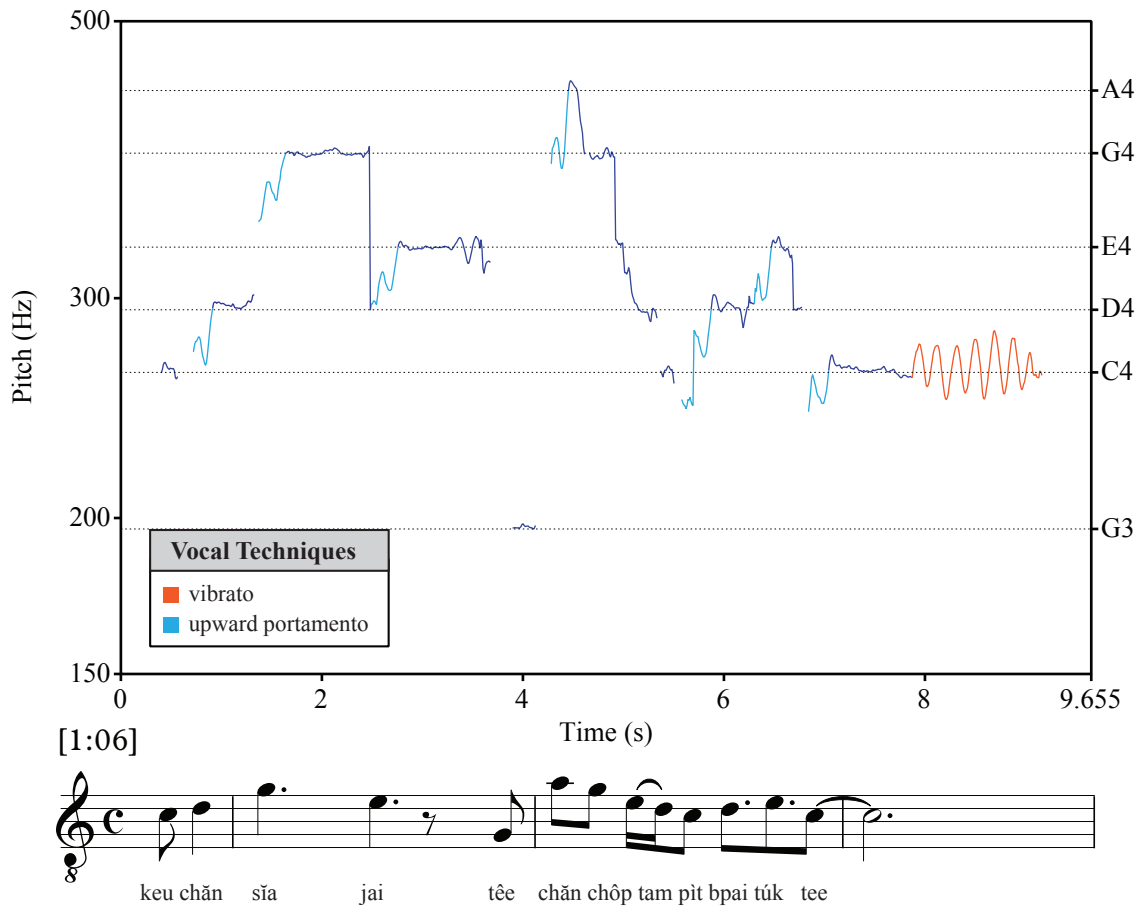
At "sia," the syllable starts at D4 before sliding up to G4, the same pitch as "sia" in the

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33. The spectrograms in this study were generated with Sonic Visualizer software (Cannam et. al. 2010).
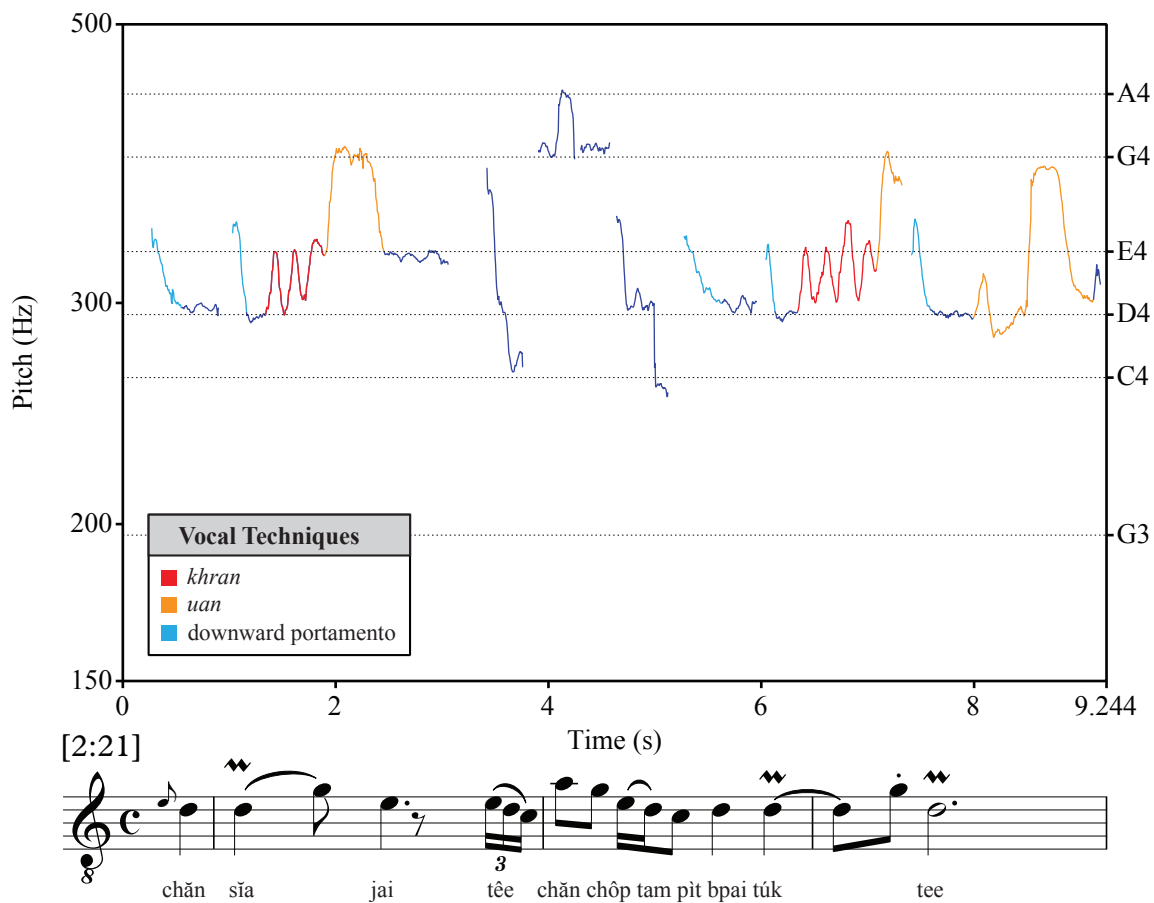
former, more pop/rock version. For both the /i/ and /a/ vowels, there is more pronounced energy in the 2,000 Hz range and above in the former version, and the dominance of the second partial on /a/ in this version (around 784 Hz) is consistent with this harmonic's association with belting (Schutte and Miller 1993). The emergence of this partial over the fundamental relates to the rising tonal characteristics of the syllable, while the latter version more directly expresses this tone by rising in pitch altogether. The wavy lines in the 2,000-3,000 Hz range of the latter version correspond to *khran,* which is discussed further below. For "jai," the former version has a noticeably more open and bright range of frequencies across the syllable. And for both "sia" and "jai," the former version has more discretely articulated differences in phonation, whereas the latter has more continuous change and apparent exploration between the /i/ and /a/ vowels. The timbral profile in between these vowels is close to that of /e/, the most common vowel sound in *uan* (Latartara 2012, 92-93).

In order to compare the pitch characteristics of the two singing styles in "I'm Sorry (Seeda)," consider the entire first line of the first chorus (1:06–1:16) as well as the corresponding version in the last chorus (2:21–2:30). Despite identical lyrics, a similar metrical setting, and the same overall melodic contour, the two parts have significant differences involving vocal expressivity in the domain of pitch. While the traditional staff notation in Examples 9 and 10 gives a general sense of lyrics and pitch for the two versions, it fails to represent the vocal nuances in play between and around equal-tempered pitches. Continuous pitch plots of the fundamental frequency of the vocal line prove to be more successful for this purpose. The plots in Examples 9 and 10 were generated by Praat phonetics analysis software and continuously map pitch for the isolated vocal part from each section.[34]

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34. See Lawson and Nissen (2017) for a detailed use of Praat software for the analysis of vocal techniques. The present analysis used ADX TRAX Pro software to extract the vocal lines from the overall mix, after which the Praat software could generate the pitch plot from the isolated vocal. We then added color to the Praat graphic output to highlight the various vocal techniques.

Example 9. Pitch plot of the detected fundamental frequency of the vocal line from 1:06–1:16 of "I'm Sorry (Seeda)."

Example 10. Pitch plot of the detected fundamental frequency of the vocal line from 2:21-2:30 of "I'm Sorry (Seeda)."

The pitch plots show three instances of *uan* in the second version, two of which begin by referencing a classical singing technique called *khran* ("shivering"). *Khran* is a kind of trill involving neighboring tones and upper-neighbor grace notes in particular; Charoenchai Sunthornwathin describes it as similar to the technique of trilling on a *saw* (Swangviboonpong 2003, 42-43, 184). In "I'm Sorry (Seeda)," *khran* thus recalls the *saw u* introduction of the song, and it appears in Example 10 as wavy lines showing rapid slides between two pitches roughly one whole step apart, i.e., between D4 and E4. The first instances of *khran* and *uan*, accompanying the word "sia," occur with the syllable starting off at a lower register than the same syllable in the earlier version. This moment is followed by a leap to the G4 of before, except as a conjunct embellishment just above E4—a form of ornamental *uan*—rather than as a belted leap from D4. The second combination at "túk" in Example 10 follows a similar pitch contour, returning to the upper G4 ornament where the previous version had

continued with an overall downward progression. As opposed to the Western vibrato of the earlier version, the end of the last "tee" in the latter version features a leap up to G4 again, although this one is not preceded by an instance of *khran.* The upward portamento approaches or "scoops" into words, shown in light blue in Example 9, contrast with the downward ones of the latter version, which, like *khran,* evoke the ornamental style of the *saw u.*

Khran is a vocal technique that is not easy for an untrained singer to perform, just as not every amateur singer can successfully use vibrato.[35] However, *khran* and vibrato are mutually distinct, with the overall absence of vibrato being a defining feature of Thai classical singing (Latartara 2012, 90). Note that the only series of waves in Example 9 occurs at the end, when vibrato takes place on the last word and oscillates around the pitch C4. Like the *khran* shown in Example 10, this oscillation happens within the 5-7 cycles/second vibrato rate that is common in multiple singing styles, though the vibrato is slightly faster than the *khran.* However, the "vibrato extent"; that is, the pitch distance above and below the central frequency, is visibly different. Unlike the former example, in which (save for the 5th upper crest) the vibrato extent stays inside of 100 cents—just as it generally averages under 100 cents for most singing styles—this same measure for the *khran* sections is right around 100 cents above and below D#4.[36] This wide extent, combined with the fact that the peaks occur at two neighboring diatonic pitches rather than around a single one, show the second version as representing a fundamentally different vocal style than the first.

There are other approaches in which traditional singing techniques factor into pop songs. The song "Yang Ngai Kor Mai Yak (ยังไงก็ไม่ยัก)" is an example of the incorporation of another form of traditional-style singing, in which the connection spans multiple recordings. The artist, Tachaya Pathumwan, released a *sepha*-style version of the song in September 2017, six months after releasing the official acoustic pop version of the song, which has warm steel-string guitar and piano accompaniment (and later in the song, *khim*) featuring a variety of minor seventh and major seventh chords. According to Miller, *sepha,* a narrative genre recounting the *Khun Chang Khun Phaen* story and originally performed at various informal occasions, had nearly died out in the mid-1900s before it was revived by Chulalongkorn University (1998, 258).[37] Pathumwan knows *sepha*-style recitational vocal style as well as other classical genres, and he plays several classical instruments. He is known for experimenting with Thai traditional sounds, and he has said in an interview that one of his goals as an artist is to take Thai music to an international stage (Ayuwattanachai 2016). For this song, he

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35. Reinforcing this point, Swangviboonpong (2003) includes an appendix that provides a translation of standards for classical singing exams, as determined in 1992 by the Thai Ministry of Higher Education. Among the seven overall points prescribed, a subsection of the second ("Singing techniques: Projection") contains *khran* as the tenth of its eighteen levels of competence.

36. See Bonjyotsna and Bhuyan (2016, 764.e12 and 764.e21) for findings on vibrato rate and vibrato extent in various singing styles, including Western classical music, rock, Chinese opera, and Indian pop.

37. See Miller and Chonpairot (1994) for a discussion of Western-documented historical accounts of *sepha* performance as well as other Thai classical music practices referenced in the present study.

uploaded the later version, which features an extended *sepha*-style introduction, on his YouTube channel without releasing it on any other music streaming sites. It has not been listened to as widely as the original version, but it represents a historically evocative complement to his initial release, and it offers a second step for listeners who may have initially been drawn in by the more widely popularized style of the original. Thus, this example is less an attempt at incorporating traditional music into pop performances than it is a way of using popular music to expand the public's familiarity with and acceptance of traditional musical styles, while also harnessing classical musical techniques as a means of establishing artistic credibility.

Traditional singing in pop music has also appeared in rearranged live performances of music that did not originally include it. An excellent example of this process is "Tua Rai Tee Rak Ter," a 2015 self-composed and self-produced song by a group of high school students from Chumporn, a province in Southern Thailand, who call themselves Tossakan (this article referenced them earlier in its discussion of *Ramakien*-based songs). The first single by the amateur band is sung in a straightforward and unrefined way with occasional inaccuracies in pitch. The song slowly rose to fame as it was covered by more well-known singers on YouTube and then by contestants on singing shows on Thai television. Two particularly famous covers illustrate how a process of mainstream popularization can go hand in hand with adding traditional musical approaches. The first is by Juthathip Soomnart in the blind audition for *The Voice Thailand, Season 5* in 2016, and it contains roughly half of the song. Before the chorus, she sings in a fairly typical R&B-pop voice, but once the chorus begins, she switches to a more closed timbre and *luk thung*-style ornaments, and it is precisely at one such pentatonic flourish (at 1:10) that an enthusiastic judge presses the button signaling his approval. The second cover is by Sarunyu Winaipanit from *The Mask Singer 3* in 2017. The performance is seven minutes long, starting with an R&B vocal riff before switching to *sepha*-style singing with the chorus's lyrics, accompanied by a *khon*-style dance performance on the stage.[38] Once the first verse starts, Winaipanit slips back to his usual pop-style singing immediately. While the dance continues throughout the song, he does not switch back to a classical singing style until the last chorus (5:17). This moment features yet another style of singing that channels *li-ke*, a form of improvisational popular musical theater whose existence traces back to before the twentieth century (Miller 1998, 301–302).[39] The interpretations and rearrangements of the two singers are different, but both use substantially more traditional

38. *Khon* (**โขน**) is a very specific type of performance art where *Ramakien* is the only story performed. The performers are masked and were originally all male. The precise origin of it is unclear, but there are records of it tracing back to around 1515. It survived the changes of the 1932 military coup through the exclusive preservation by the Fine Arts Department of the Thai government, and is now regarded as a valuable form of Thai art with a long history (Miller 1998, 250-252).

39. For stylistically hybrid performances such as these, it can be difficult to tell precisely which genre the singing techniques are referencing, and this study has generally been focused on analytically exploring and drawing sonic connections rather than documenting the particular musical intentions of specific performers and songwriters. Nonetheless, in this case, Winaipanit has confirmed in an interview his intention to sing in *sepha* style at the beginning and in *li-ke* style for the last chorus (https://www.youtube.com/watch?v=J9oJpaF5WJQ).

vocal approaches than the original. There are several reasons why the original piece lends itself well to this process of traditionalization, including the reference to *Ramakien* in the lyrics, the appearance of *ranat ek* interludes in the original recording, and a chorus that exclusively utilizes a major pentatonic scale. While illustrating a convergence of traditionalism and mainstream popularization, these performances provide an example of historical Thai sounds maintaining a presence on the live stage in addition to the recording studio.

The above analyses of post-2010 examples of *Thai sakon* show how traditional Thai musical characteristics continue to sound in various ways within contemporary popular music. A topic for further consideration and research is the historical and cultural question of why these incorporations have taken place.[40] Siriyuvasak (1990; 1998) is careful to argue that such developments are neither the simple result of an imposition by a dominant music industry nor an unmediated emergence of grassroots popular taste. Recent historical and ethnographic work such as that of Eamsa-ard (2006), Wuttipong (2012), Sriget (2014), and Mitchell (2015) is bringing to light the complex ways in which tradition and modernity, Thai identity and globalization, and music and popular culture interact within rapidly developing technological and communicative contexts. Such work can help to explain the dynamics behind how traditional sounds and approaches continue to factor into evolving contemporary musical settings.

One possible perspective that merits further study is that the post-2000 commercial success of historical practices being invoked within *Thai sakon* is a realization of political and governmental efforts to more fully infuse traditional Thai music within the country's educational system. By the end of the twentieth century, the overall number of people in Thailand who studied this music was rapidly increasing, because the curriculum that schools across the country abided by ensured that children were educated in both Thai and Western music (Myers-Moro 1989, 193).[41] Such curricular efforts extended to university programs as well (Wong 1999), and there is a post-2000 trend of teaching local traditions in addition to Central Thai classical music (McGraw 2007, 128). The repertoire analyzed in this paper suggests that these various efforts in the realm of education are succeeding in creating a Thai musical foundation that can sound across a wide range of styles and influences, while also cultivating audience tastes for such sounds. Even in its most apparently globalized instantiations, *Thai sakon* folds in a variety of traditional musical approaches for listeners who are attuned to them. As they have throughout Thai history, international musical influences

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40. A related area for further investigation is the question of how the dissemination and adaptation of traditional musical practices is transforming these practices themselves. In some cases, they have been preserved and perpetuated through markedly different cultural processes centered around insularity and close personal relations (see, for example, Wong 2001 and Adler 2014).

41. Teerapaun Tanprasert observes: during my middle and high school years in Thailand, I directly experienced the increase of exposure to Thai music in the curriculum. Initially, there was a class each for Western and Thai arts, but by the time I graduated, both compulsory art classes were two forms of Thai arts, while the Western music class became an elective.

become adapted, absorbed, and reconfigured to combine with earlier practices. Thai popular music resonates with the sound of its roots.

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