

THE SPEAKING BOW: LINGUISTIC RESONANCES IN STRING PLAYING

Denise Fan¹, Postdoctoral Research Fellow,
Academy of Music – Hong Kong Baptist University, Hong Kong

Abstract

The phenomenon of subconscious linguistic-prosodic imprint has been studied in music composition (Patel & Daniele, 2003; Temperley, 2022), yet its operation in performance remains terra incognita. Such a persistent gap reflects the formidable challenge of assessing how native phonetic patterns covertly shape the “feel” in musical expression – idiosyncratically encoded in articulation. To investigate this embodied interaction, the present study pioneers a novel methodology that deploys the unparalleled articulative freedom offered by the Baroque bow to distill language “flavors.” Multilingual adaptations of Toshinobu Kubota’s *La La La Love Song* serve as phonetic templates for translating distinctive prosodic features, including Japanese pitch accent, Cantonese syllable-finals, and English stress-timing, into repeatable bowing schemata. Preliminary spectrogram analyses suggest that string players’ articulation aligns with native prosody, particularly in speech-inflected performance. For instance, spectral qualities in Anner Bylsma’s strokes mirror Dutch guttural timbres, and Ophélie Gaillard’s note shaping replicates the intensification of French final lexical stress. The proposed schemata provide a blueprint for interrogating “native-ness” and “foreign-ness” in performance. By mapping phonetic patterns onto bowed gestures, this work offers a method to analyze the permeation of native prosody in instinctive playing, refining expressive intent through the conscious articulation of the sensuality inherent in linguistic sound.

Keywords: speaking bow, musical articulation, linguistic acoustic patterns, language-music interplay cultural resonance

¹ Email address: denisecyfan@gmail.com

Corresponding address: Flat H, 10/F, Block 16, Chi Fu Fa Yuen, Pokfulam, Hong Kong

1. Introduction

Starker definitely has a tendency to perceive phrases from the perspective of his native language. That suits how he plays, how he thinks about music, and how it fits into his overall concept of how music is put together. This is organic (Geeting, 2008: 99). Geeting's penetrating perspective chimes with a persistent intuition among performers: that native language silently shapes the musical mind. By "organic," she calls attention to the phenomenon of how deeply music and language are integrated as an "expressive whole" to facilitate communication (Faudree, 2012: 520). For Starker, this blend of auditory experience "in the head" is projected outward through cello playing. Wordless yet profoundly linguistic, such expression powerfully articulates the rich complexity of human interiority. The mystery of this alchemy has been a time-honored philosophical fascination, driving scholars to map the structural conventions of music onto those of language, fueling countless arguments for their isomorphic parallels or categorical distinction (Temperley, 2022).

The plausible processes involved were teased out by Bernstein (1973/1976) in his provocative *Norton Lectures, The Unanswered Question*, where he compared musical units with three generative topics in linguistics, namely phonology, syntax, and semantics. Deploying deeply premeditated analogies and metaphors, his concepts require a highly erudite and hermeneutical mind to apprehend the unconscious logic behind music composition as demonstrated by human's faculty in formulating words and sentences. In an article that contravenes Bernstein's theory, Keiler (1978: 195) acknowledges "the intrinsic interest and value" of the subject. I argue that there is an obvious reason for this, as inscribed in Geeting's remark with the word "native." There is a particular "ring" to this word, especially when contrasted with its shadow term, "foreign." This visceral tension felt in music was noted by Robert Hall (1953/1972: 284), "the Englishman simply feels an 'instinctive' affinity to Elgar's music, and the non-Englishman feels its 'strangeness'." He ascribed the subconscious preference to the flavor of British English, characterized by "a wide range of variation in pitch and a predominance of falling patterns," which permeated Elgar's works to the extent that even the signature minor-third drop in the Welsh tune of his *Introduction* and *Allegro for Strings*, Op. 47, was irresistibly developed through his trademark leaps and descents.

The musical "native" and "foreign" were most sharply exposed by the serious discourse on Hungarian rhythm (Hooker, 2013: 154–229), epitomized in Bartók's and Kodály's compositions born out of their exhaustive folksong research. Their targeted effort to embed native speech patterns into musical structures transcends mere nationalism, revealing something more fundamental: the linguistic identity etched into every thought, for indeed "every human being speaks all the time to himself when he is 'thinking silently'" (Hall, 1953/1972: 284).

This inextricable infiltration of linguistic prosody into music was first empirically validated by Patel and Daniele (2003). Applying the nPVI (normalized Pairwise Variability Index) to instrumental themes by native English- and French-speaking

composers from the turn of the twentieth century—an era when the search for national expression illuminated linguistic-musical connections, they demonstrated how the musical rhythms mirrored the characteristic stress- and syllable-timed patterns of the two languages, respectively. Thereafter, studies proliferated in examining the cognitive intertwinement of speech and musical prosody (pitch, rhythm, and stress) as a means to trace the culturally constructed sonic “mental framework” (Patel, 2008: 9) that shapes our auditory predispositions (Arbib, 2013; Patel, 2008; Scharinger & Wiese, 2022).

While approaching language and music as “two distinct sound systems” (Patel, 2008: 9) for comparison has yielded fruitful insights into how their interaction forges an acoustic signature that calibrates our auditory perception, its manifestations are best studied not in the musical score, but in the embodied utterance through performance, which renders our “accent” audible. Defined as “a way of pronouncing a language that is distinctive to a country, area, social class, or individual” (Oxford University Press, n.d., Definition II.7.a), an accent is a cultural construct where any minor variations are instantly detected to place a speaker as “‘one of ours’ or ‘not one of ours’” (Graham, 1969: 448). Since this installed (though continuously evolving) auditory filter colors our hearing constantly, it inevitably transfuses instrumental playing via action-perception coupling (see Novembre & Keller, 2014). In this light, the observed phenomenon that “a musician tends to reproduce performances of the same music with the same prosodic choices” (Palmer & Hutchins, 2006: 247–248) exemplifies this very transfusion.

One might argue that a performer’s accent, discernible in their consistent musical prosody, is developed through training and sharpened by in-depth, diverse stylistic acquisitions. Following this conventional view, “native-ness” or “foreignness” is gauged by whether the performer possesses sufficient knowledge to express the spirit of an artistic syntax, a point compellingly made in cellist Guy Fishman’s (2014) critique of technically accomplished students for “speaking a language with a heavy accent.” Yet, before an accent is a matter of stylistic fluency, it is first and foremost a product of the cognitive ear. Its “native-ness” originates in the infant’s processing of the “music-ness” of speech (Brandt, Gebrian, & Slevc, 2012). By analyzing how linguistic prosody seeps into instrumental performance, we can pinpoint the specific nuances in playing informed by a performer’s native language.

Tracking this influence has remained a profound challenge, with virtually no existing literature to build upon. Precisely because this missing piece reveals the “tendency” (Geeting, 2008: 99) that shapes our aesthetic identity, it demands a lens exquisitely honed in on the nuances of articulation, one we find in the practice of Baroque string playing.

2. Sound for words to Sound of words

The essence of Baroque music lies in evoking the affective dimensions of any given text. The power of words is crystalized in Leibniz’s philosophy that “language

is not the vehicle of thought but its determining medium” (Steiner, 1975: 74). In pursuit of “the incorruptible truth” (Egginton, 2009: 10), momentarily accessed through the state of awe, Baroque composers attempted to evoke the soul’s yearning for the truth by tuning into the sense and sensuality of a text. By acknowledging the capability of words to carry the depth of human felt passions – through the synthesis of intellect and imagination – composers made the intelligibility of the text their top priority, giving rise to the *seconda pratica*. The shift to plangent monody, harsh chromatic punctuations, and storytelling through harmonies all served to create a resonance chamber for the words to “penetrate the intellect of others” (Caccini, 1602/2021: 27).

Caccini enacted this priority by radically reinterpreting Plato’s view that a song consists of “the words, the tune, and the rhythm,” and “the music and the rhythm must follow the speech” into the dictum, “music was nothing other than the words, and [then] the rhythm, and finally the sound, and not otherwise” (Caccini, 1602/2021: 26–27). In doing so, he rendered music a mere sonic vessel for words. This reorientation epitomizes the Baroque desire to stir the heart with passions that remain, for the mind, “just beyond grasp” (Egginton, 2009: 11) – even though the music thereby created is yet another “corrupted” (Egginton, 2009: 10) form of mediation, one that deceives by dramatizing the illusion of promising a truth.

The Baroque quest for a universal musical language that rivals persuasive speech to transport audience to affective states springs a multitude of creative experimentations, which enthralled generations of “Neobaroque” (Egginton, 2009: 16) pursuers. United by “a love for language” (Fishman, 2014), contemporary HIP (historically informed performance) practitioners approach this musical speech act via three interconnected fronts: literacy, inflection, and timbre. A sophisticated literacy has been honed by an incessant research into stylistic markers at the regional level (e.g. Roman vs. Venetian; see Vanscheeuwijck, 2020), providing practical insights into interpreting individual composers’ works. The prevailing stratified inquisitions into each composer’s unique language were recast as the bedrock principle for learning historical performance, which is “just another language” (The Juilliard School, 2016). This “foreign language” (Fishman, 2014) is distinguished by a highly inflected delivery that accords with the strategic combinatorial discourse (see Quantz, 1752/1966). Its mastery is fundamentally what rhetoric is all about, which Rifkin argues is simply “a way of describing what good musicians of any era have always done” (Sherman, 1997: 172). To internalize the prescribed inflections, players turn to period instruments to explore the specific articulations they afford, impressed by their palpable timbres. The physical engagement with these instruments and the consequential “auditory mental imagery” (Barbero & Calzavarini, 2024) conceived through the “grain” of the sounding body (Hui, 2020: 3) vividly coincide with speaking in the mind. Hence, the obsession with the word “speak” – a near-ubiquitous term within HIP discourse.

Carrying on the humanistic adventure sparked by the Baroque “theater of truth” (Egginton, 2009), a logical Neobaroque exploration would be to confront the very sound of words as we navigate the digital matrix of babel in our everyday lives.

The unanimous treatment of “born” and the multiple interpretive possibilities offered by what comes before demonstrate both the robust prosodic imprint as well as the fluctuating potentials imparted by the linguistic system, especially when the semantic meaning and the prosody of the text are congruent or incongruent with the musical design. In fact, the music of the chorus *For unto us a child is born* was adapted from Handel’s earlier duetto, *No, di voi non vo’ fidarmi* (“No, I do not want to trust you”; Figure 3). This original version presents a clear phrasal directive: an emphatic, resentful “no” followed by a single teleological gesture with an arrival on the syllable “dar.”



Figure 3: Musical theme of *No, di voi non vo’ fidarmi*

The precise linguistic-musical prosodic alignment of the Italian original (*No, di voi non vo’ fidarmi*) and the tension and acceptance revealed by the English adaptation serve as a compelling validation of Mattheson’s idea that the notes themselves hold no intrinsic expressive value but are affectively charged by words (Haynes & Burgess, 2016: 188). More crucially, this commutable melodic pattern illuminates how the distinctive acoustic properties are highlighted in subsequent versions in other languages, providing a unique window for performers to explore the characteristic “flavors” of different languages.

3.1. Experimental foundation and methodology

To this end, I selected Toshinobu Kubota’s (1996) *La La La Love Song* (best known as the theme song for the drama series “Long Vacation”) as an experimental template for two reasons. First, its R&B tune counterbalances classical stylistic predispositions. Second, the song exists in multiple adapted versions spanning a diverse array of languages. From this corpus, I undertook a close analysis of the original Japanese rendition, alongside versions in my native Cantonese, as well as in English, Mandarin Chinese, and Malay.

The experimental process relied essentially on the specific affordances of the Baroque bow and cello strung with gut. The bow’s convex shape and tapered design produce a pronounced decrescendo in weight from frog to tip, making it feel like a natural extension of the arm and enabling the player to “speak” with unparalleled articulative freedom. Precise tactile engagement is further demanded by the gut strings, which are acutely sensitive to bow pressure, speed, and contact point. Coupling both allows a high degree of precision in articulation, effectively mirrors verbal utterances by marking, shaping, and closing musical units from individual note to phrase level.

While the articulative freedom offered by the Baroque bow encourages obsessive sound copying down to the micro-phoneme level, as illustrated in Reiter’s guide for translating Italian pronunciation into violin bowing:

In “Corelli,” the three syllables are not equal either in length or stress: “Co” is accented with an immediate diminuendo leading into the rolled “r.” There is a *Messa di voce* (◁) through the “e,” the climax of which is the strongest part of the word, and there is a little extra bounce on the “lli.” An Italian speaker would pronounce both “l”s, with a barely perceptible break in the sound between the “e” and the “lli.” (Reiter, 2020: 32)

The overly meticulous approach is not only impractical but also incapable of reflecting certain phonetic differences such as “bet” vs. “bat” and “bet” vs. “debt.” Therefore, I developed bowing schemata designed to capture one quintessential prosodic feature for each target language.

Verse lines were carefully chosen both to ensure they were set to identical melodic material across all language versions and to avoid non-lexical vocables (e.g., la la la, na na na). Furthermore, melodic and rhythmic normalization was performed to remove minor discrepancies that would detract attention from articulation. The non-linear experimental process involves several key steps:

- Repeated recitation at various speeds to discern phonetic features that either “roll off the tongue” or cause articulatory resistance, as well as to internalize prosodic nuances
- Utilizing Speechify, a text-to-speech AI tool, to learn the pronunciation of words in unfamiliar languages (particularly Malay) and to observe the varied inflections generated by different speaker styles
- Cross-verifying my internal auditory representation of pronunciation with various prosody checkers, dictionaries, and IPA (International Phonetic Alphabet) resources
- Testing and distilling prosodic features on the cello, using audio recording for evaluation to determine which elements can be reliably captured and recognized
- Annotating the lyrics and transferring corresponding expressive realizations onto the music score to encode prosodic intent; devising shorthand notation as necessary to facilitate performance.

Imperatively, I relied on my intuition and practical experience to evaluate the feasibility of executing the identified phonetic features on the cello. The resulting bowing schemata are inevitably a form of abstract representation of the embodied acoustic apperception.

3.2. Japanese

- Distinctive phonetic feature: Pitch accent
 - Articulation was achieved in three steps:
1. Grouping morae: Morae were grouped into syllabic units and slurred under a single bow stroke to reflect their cohesive articulation.

ためいきのまえに
 ここにおいでよ
 いきがとまるくらいの
 あまいくちづけをしょうよ
 ひとこともいらないさ
 とびきりのいまを

Figure 4: Japanese verse lines with moraic groupings underlined



Figure 5: Score excerpt illustrating moraic groupings realized with slurs

2. Mapping pitch accents: Each pitch-accent type was mapped to a bowing sequence that corresponds to the pitch contour.

Pitch-Accent Type ⁴	Pitch Contour	Bowing Sequence
<i>heiban</i> (“flat board”; “accentless”)	low-flat	up > down (even pressure)
<i>atamadaka</i> (“head high”)	high-low	down > up
<i>nakadaka</i> (“middle high”)	low-high-low	up > down > up
<i>odaka</i> (“tail high”)	low-high	up > down

Figure 6: Corresponding bowing sequences for the four Japanese pitch-accent types

ためいきのまえに
 ここにおいでよ
 いきがとまるくらいの
 あまいくちづけをしょうよ
 ひとこともいらないさ
 とびきりのいまを

Figure 7: Japanese verse lines annotated with pitch accents

Figure 8: Score excerpt with bowing indicated in accordance with pitch accents

3. Phrasing: Word-level pitch accents were integrated into sentence-level prosodic contours, shaped by phrasal dynamics.



Figure 9: Japanese verse lines with pitch contours machine-generated by Prosody Tutor Suzuki-kun

Figure 10 shows a musical score excerpt in bass clef, 4/4 time. The score is divided into three systems, each with a measure number (1, 5, 9) at the beginning. The lyrics are in Japanese:
 System 1: た め い き の ま え に こ こ に お い で よ い き が と
 System 2: ま る く ら い の あ ま い く ち づ け を し ょ う よ ひ と こ と
 System 3: も い ら な い さ と び き り の い ま を
 Dynamic markings include *mf* and *f*. Pitch-accent contours are indicated by arrows above the notes.

Figure 10: Score excerpt with dynamic markings mapping pitch-accent contours
 **Refer to Audio 1 for performance realization.

3.3. Cantonese

- Distinctive phonetic feature: Syllable-final types
- Shorthand symbols were devised to facilitate intuitive bow articulation in real time for each syllable-final type. The corresponding bow stroke qualities are detailed in Figure 11.

Syllable-Final Types	IPA Finals	Shorthand Symbols	Bow Stroke Qualities
monophthong	:	—	flat
diphthong	:i :u	⌒	swell (with a down-bow)
nasal coda	:m :n :ŋ	┘	nudge (slight pressure with a slow bow)
plosive coda	:p :t :k	∕	short and sharply articulated (with an up-bow)

Figure 11: Cantonese syllable-final types with devised shorthand symbols and corresponding bow stroke qualities

Figure 12 shows a musical score excerpt in bass clef, 4/4 time, annotated with shorthand symbols and corresponding bowing directions. The lyrics are in Cantonese:
 System 1: 請 珍 惜 最 愉 快 之 時 是 個 極 高 層 次 陪 伴 自 己
 System 2: 喜 歡 的 女 子 悠 長 大 假 裏 天 空 海 闊 尋 奇 遇 能 量 是 手
 System 3: 中 敲 擊 的 拍 子 回 眸 在 心 內 像 糖 衣
 Shorthand symbols (—, ⌒, ┘, ∕) are placed below the notes to indicate bowing directions.

Figure 12: Score excerpt annotated with shorthand symbols and corresponding bowing
 *The particle “的” was treated with a light up-bow staccato, reflecting its reduced prosodic weight.

*In keeping with conventions of bowing economy, the devised sequences were occasionally reversed (words italicized) to ensure practical playability.

**Refer to Audio 2 for performance realization.

3.4. English

- Distinctive phonetic feature: Stress-timed prosody
- Two levels of prosodic stress were captured: lexical (word-level) and phrasal (sentence-level). While lexical stress is relatively fixed, phrasal stress requires semantic interpretation, which varies by performer. In both cases, stressed elements were articulated with a down-bow. Brackets were used to visually group notes belonging to a single word.



Figure 13: Score excerpt showing down-bow stresses and word groupings

**Refer to Audio 3 for performance realization.

3.5. Mandarin Chinese

- Distinctive phonetic feature: Tone
- Shorthand symbols were devised to map the four tones to their corresponding bow stroke qualities.

Tones	Shorthand Symbols	Bow Stroke Qualities
1 : -		even
2 : /	∪	scoop
3 : v	∩	dense press
4 : \	∩	accented with a sustained decay

Figure 14: Bow stroke qualities matching the four tones in Mandarin Chinese, represented by shorthand symbols

Figure 15: Score excerpt showing shorthand articulation markings in conjunction with the four tones in Mandarin Chinese

*Tonal variations can exist depending on the speaker.

*The particle “的” (italicized) was played with a light bow stroke.

**Refer to Audio 4 for performance realization.

3.6. Malay

- Distinctive phonetic feature: Syllable-onset articulation
- Shorthand symbols were devised to express the bow stroke qualities in imitation of the four major types of syllable-onset articulation in Malay. Brackets were used to visually group notes belonging to a single word.

Types of Syllable-Onset Articulation	Shorthand Symbols	Bow Stroke Qualities
Alveolar [n, t, d, s, l]	L	even with a swift start
Labial [m, b, p]	v ⁻	slight press (stopped) at the start of stroke
Palatal [ɲ, tʃ, dʒ, j]	∪	scoop
Velar [ŋ, k, g, w]	-	marked, dense, tight, with a concentrated core

Figure 16: Bow stroke qualities and shorthand symbols matched to the four major types of syllable-onset articulation in Malay

*Light syllables (e.g., “-an,” “a-”) falling outside the core articulation types were realized with a simple up-bow stroke to reflect their reduced prosodic weight.

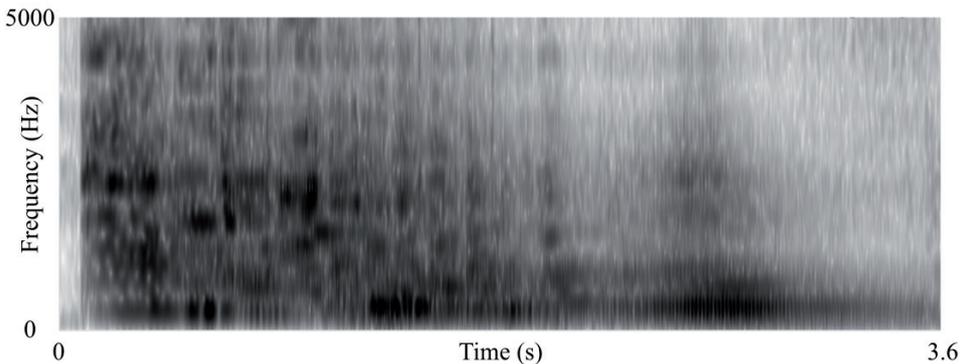


Figure 18: The “spoken” articulation: Spectrogram of the opening scale in J. S. Bach’s *C-major Cello Suite Prelude* (Anner Bylsma)

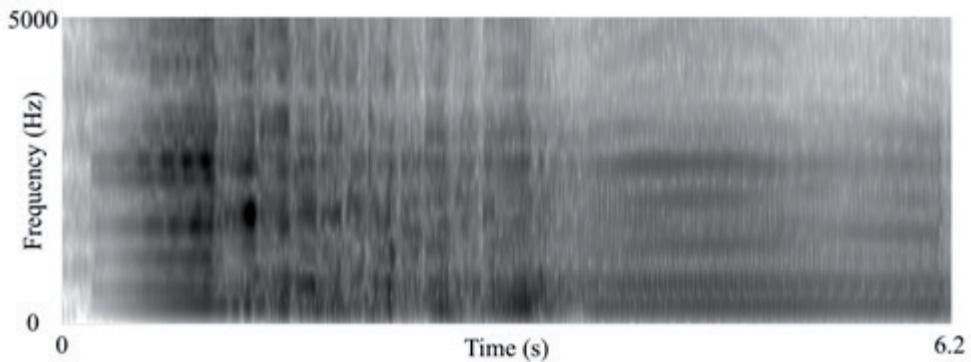


Figure 19: The “sung” line: Spectrogram of the opening scale in J. S. Bach’s *C-major Cello Suite Prelude* (Alisa Weilerstein)

Zooming closer into Bylsma’s first note C (Figure 20) reveals an intriguing feature: a visible splice in the upper overtone partials. This momentary discontinuity is reminiscent of the voiceless plosive in the guttural Dutch “g” in “goeiemorgen” (Figure 21; Easy Dutch, 2023). Notably, since both the tonic C and the dominant G exhibit this characteristic “stop gap” (Figure 22), it could very well be indicative of an iconic timbre present in Bylsma’s inner ear, cultivated from his native language.

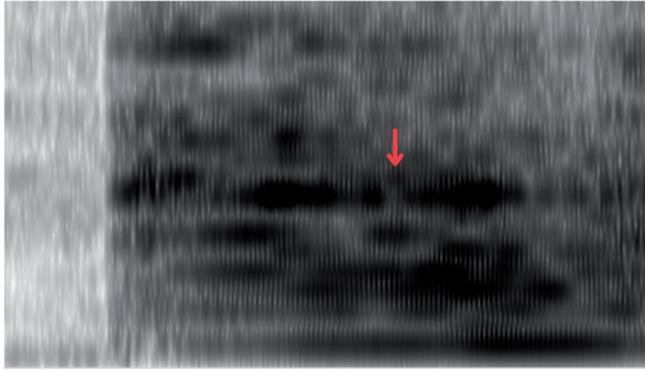


Figure 20: Spectrogram of the articulatory “splice” in Bylsma’s first note C

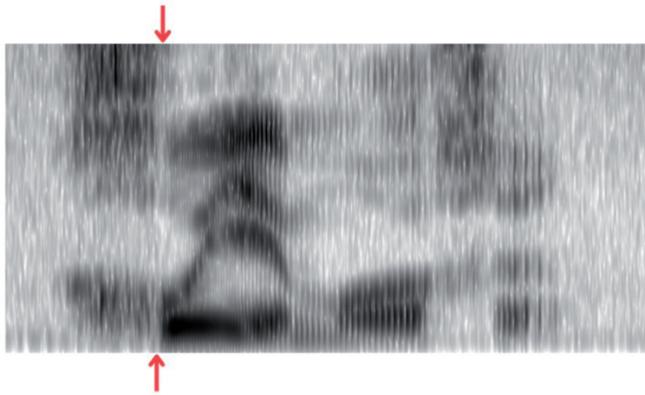


Figure 21: Spectrogram of the guttural “g” from the onset of the Dutch word “goeiemorgen”

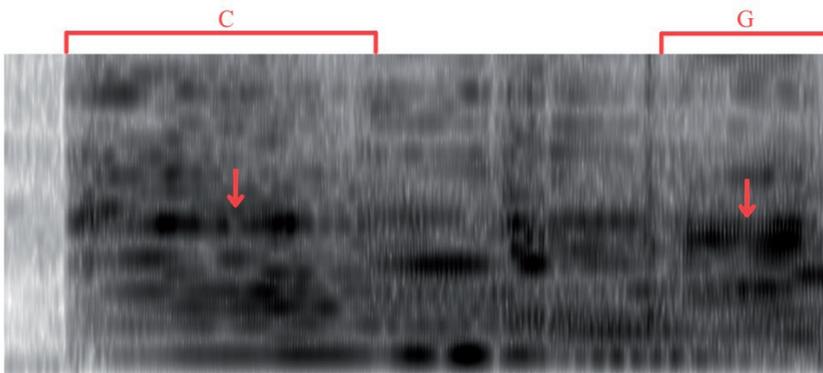


Figure 22: The recurring “stop gap” pattern in both the tonic C and dominant G

Compounding the observed articulatory parallel between bowed expression and voiced utterance, a further exhibit provides compelling support for native prosody steeping into cello playing. Figure 23 presents the spectrogram of the opening C

played by the French cellist Ophélie Gaillard (Bach, 2011), who champions “speaking with the bow” (The Strad, 2022). The gathering of energy intensity towards the end of the note closely resembles the well-established prosodic feature of French final lexical stress (Temperley & Temperley, 2013), as demonstrated by the parallel acoustic behavior in the word “café” (Figure 24; Easy French, 2023).

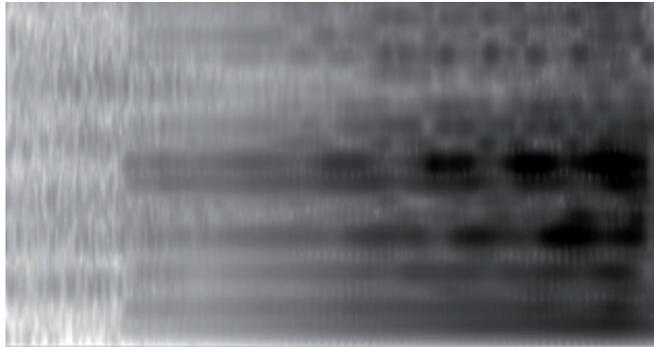


Figure 23: Spectrogram of Gaillard’s opening C, showing late-onset energy concentration

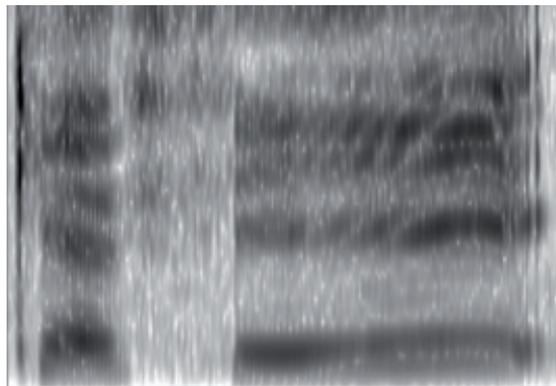


Figure 24: Final lexical stress in the word “café”

Extending the comparative spectrogram analysis to the proposed bowing schemata, it is found that the acoustic profiles of the translated syllable finals in the Cantonese recorded specimen best match the spectrographic profiles of the corresponding syllable-final phonemes found in natural speech (Easy Languages, 2021). The open-ended monophthong displays stable, well-defined formant bands, reflecting its sonorous quality (Figures 25 & 26). Without dramatic pitch changes, the bowed diphthong mirrors the C-shaped formant glide of its spoken counterpart through a gradual increase in intensity that steers the formants upward, effectively giving the impression of the vowel transition (Figures 27 & 28). Figure 29 shows the successful replication of the intended nudge quality for the nasal coda via damped resonance. The energy distribution and the clear demarcation mirror the spoken version (Figure 30) with striking congruence. Although the muted part of the spoken

plosive coda (Figure 32) is not realized in playing for musical reasons, the quick clearance of upper harmonics – reinforced by a loud, short ring in the higher partials – effectively simulates its crisp articulation (Figure 31).



Figure 25: Spectrogram of the bowed monophthong word “子”

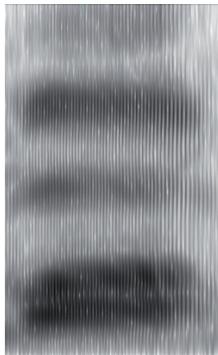


Figure 26: Spectrogram of the spoken monophthong word “喝”



Figure 27: Spectrogram of the bowed diphthong word “陪”



Figure 28: Spectrogram of the spoken diphthong word “好”

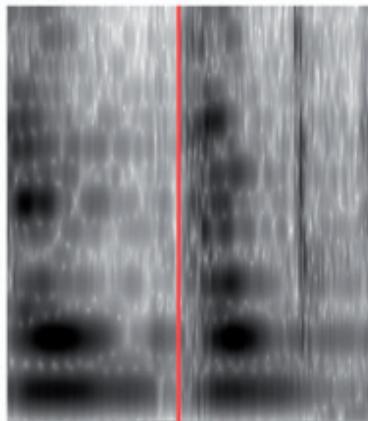


Figure 29: Spectrogram of consecutive bowed nasal-coda words “天空”



Figure 30: Spectrogram of the spoken nasal-coda word “香”



Figure 31: Spectrogram of the bowed plosive-coda word “極”

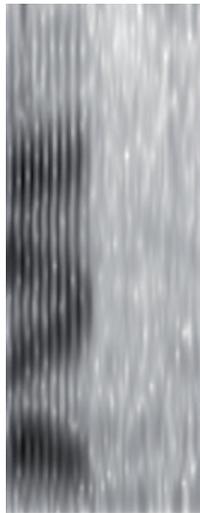


Figure 32: Spectrogram of the spoken plosive-coda word “歷”

As compelling as these visual representations are, they offer only flickers of correspondence at the microscopic level. However, zooming out to compare larger phrasal units proved unproductive, as the spectrographic signatures of wordless bowed utterances and spoken words are inherently incommensurable (see Figures 33 & 34). A forced reading risks imposing a false gestalt, connecting dots where none meaningfully exist.

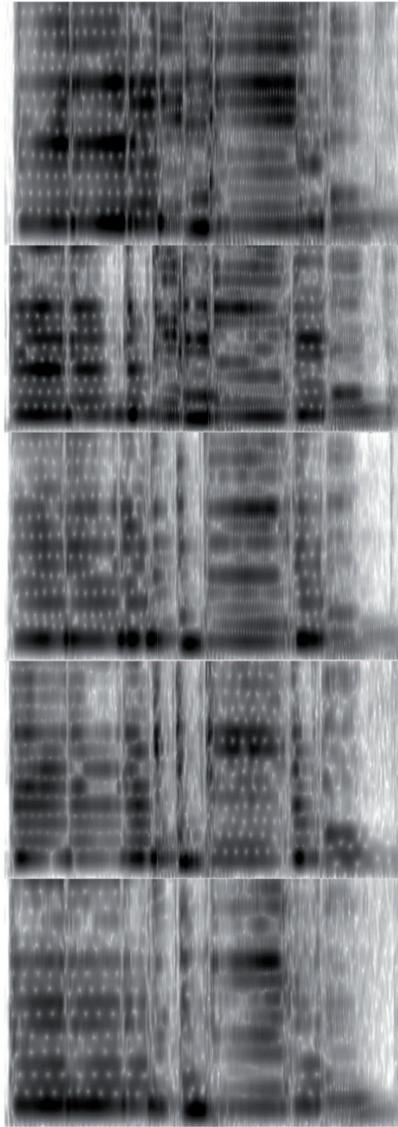


Figure 33: Spectrograms of the bowing-schemata realizations of the first phrase: Japanese, Cantonese, English, Mandarin Chinese, and Malay (top to bottom)

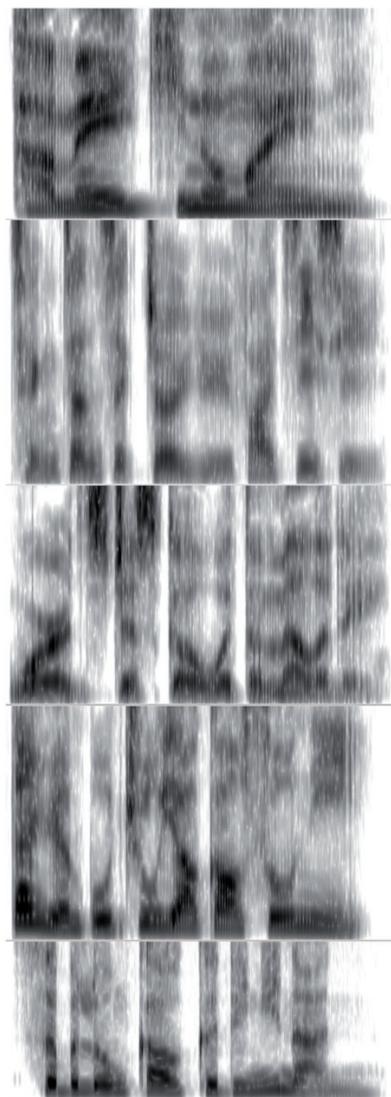


Figure 34: Spectrograms of the first verse line generated by Speechify: Japanese, Cantonese, English, Mandarin Chinese, and Malay (top to bottom)

Nevertheless, the promising glimpses of iconic native prosodic markers in cello playing – from Bylsma’s Dutch guttural timbre to Gaillard’s French final stress to my Cantonese syllable-final articulation – point to the plausible existence of a “linguistic aura” embodied in string performance. By absorbing and attending to the totality of words: their semantics, their syntax, and their phonetic grain, the HIP community has breathed life into *Non l’intendite parlare?*

5. Conclusion

Do we have an “accent” when playing in the same way we speak? That depends on whether the involuntary internal dialogue running in our mind is “accented.” Since our native language shapes how we listen (Cutler, 2012), and any subsequent auditory input is adapted through its sonic framework cultivated from our early years, it is reasonable that musicians who dedicate their lives to sound crafting have long sensed the connection between linguistic imprint and musical realizations. In order to investigate this elusive phenomenon, I propose using the bowing schemata as a springboard for diving into the articulative nuances expressed in both string playing and speech sounds. Speech by nature is “fast, continuous, variable, and nonunique” (Cutler, 2012: 39); however, for the purpose of unraveling the mystery of auditory cognition, it is necessary to treat it as a slow, discrete, stable, and unique entity to discern its particularities. The main challenge is to define what counts as a distinct quality of a language: is the articulatory gesture effortlessly produced by a native speaker yet causing great resistance for a non-native speaker a diagnostic marker? The deliberate act of sound copying, through the use of the extra-responsive Baroque bow, opens a path to evaluate our subjective experience. This process of intentional engagement, translation, and embodiment enables a direct interrogation of “native-ness” and “foreign-ness,” and the derived blueprint provides a point of departure for further empirical exploration (see Fan, 2025 for an initial study).

Identifying “native-ness” in wordless instrumental expression is understandably a sensitive topic as it entangles schools of training, aesthetic ideals, and listening exposure. If we associate a musical “accent” with stylistic literacy, we face the danger of cementing the idea that a predominant, tasteless trend exists in performance. This framing of “accent” as a marker of deviation finds its echo in Graham’s (1969: 445) strongly worded interpretation of it as “speaking a language in a way that betrays the speaker’s national or geographical background.” However, the discomfort experienced by the sensitive ear – that reflexive tension provoked by accents in spoken language – need not be translated into the musical realm. The beauty of musical micro-expressions is founded precisely on the acceptance of diverse “accents” shaped by our native language. The bowing schemata was formulated with this in mind and in alignment with the broader HIP ideal of attending to subtle nuances to elevate musical expression. By tapping into the vast inventory of prosodic gestures from myriad languages, we can navigate fluidly between the stock of phonetic patterns we are aurally wired with and those sensuous utterances encountered in foreign languages, to enrich our musical delivery. Just as syntactic strings guide the mind, so does linguistically-informed string articulation evoke the beauty that resonates with the passions.

References

- Arbib, M.A. (2013). *Language, music, and the brain: A mysterious relationship*. Cambridge, Massachusetts: The MIT Press.
- Bach, J.S. (1992). Cello suite No. 3 in C major, BWV 1009: Prélude [Musical work recorded by Anner Bylisma]. On J. S. Bach: Suites for violoncello solo, BWV 1007–1012. Sony Classical. (Original work published ca. 1720)
- Bach, J.S. (2011). Cello suite No. 3 in C major, BWV 1009: Praeludium [Musical work recorded by Ophélie Gaillard]. On Bach: Suites pour violoncelle seul (intégrale). Aparté. (Original work published ca. 1720)
- Bach, J.S. (2020). Cello suite No. 3 in C major, BWV 1009: Prelude [Musical work recorded by Alisa Weilerstein]. On Bach: Cello suites. Pentatone. (Original work published ca. 1720)
- Barbero, C., & Calzavarini, F. (2024). *Experiences of silent reading. Phenomenology and the Cognitive Sciences*. <https://doi.org/10.1007/s11097-024-09966-x>
- Bernstein, L. (1976). *The unanswered question: Six talks at Harvard*. Cambridge, Massachusetts: Harvard University Press. (Lecture series delivered 1973)
- Brandt, A., Gebrian, M., & Slevc, L.R. (2012). Music and early language acquisition. *Frontiers in Psychology*, 3, Article 327. <https://doi.org/10.3389/fpsyg.2012.00327>
- Caccini, G. (2021). Le nuove musiche (L. Abadie, Trans.). In E. Rotem & T. Braithwaite (Eds.), *Giulio Caccini's published writings: Bilingual edition* (pp. 24–46). Early Music Sources. (Original work published 1602) <https://www.earlymusicsources.com/pie#h.jcqlsz12gfcn>
- Cutler, A. (2012). *Native listening: Language experience and the recognition of spoken words*. Cambridge, Massachusetts: The MIT Press.
- Easy Dutch. (2023, June 9). 100 words you should know when coming to the Netherlands | Super easy Dutch 20 [Video]. YouTube. https://www.youtube.com/watch?v=jSyrqH_MMOM
- Easy French. (2023, October 22). What do French people actually eat? | Easy French 189 [Video]. YouTube. <https://www.youtube.com/watch?v=p65EBC9IW9k>
- Easy Languages. (2021, January 20). Hong Kong Museum of History | Easy Cantonese 8 [Video]. YouTube. <https://www.youtube.com/watch?v=4qb5Oghwv-Q>
- Egginton, W. (2009). *The theater of truth: The ideology of (Neo)Baroque aesthetics*. Stanford, California: Stanford University Press.
- Everett, P. (2002, December). George Frideric Handel: No, di voi non vo' fidarmi, HWV 189. Edition HH. <https://www.editionhh.co.uk/hh40pref.htm>
- Fan, D. (2025). Perception of musical articulation: Does native monosyllabic or polysyllabic language determine perceived naturalness? [Poster session]. *The 18th International Conference on Music Perception and Cognition*, São Paulo, Brazil.
- Faudree, P. (2012). Music, language, and texts: Sound and semiotic ethnography. *Annual Review of Anthropology*, 41, 519–536. <https://doi.org/10.1146/annurev-anthro-092611-145851>

- Fishman, G. (2014). On “what makes a Baroque cellist”: Foreign languages: Part 2. cellobello. <https://cellobello.org/cello-blog/baroque/on-what-makes-a-baroque-cellist-foreign-languages-continued/>
- Geeting, J. (2008). *Janos Starker: “King of cellists”: The making of an artist*. Simi Valley, California: Chamber Music Plus Publishing.
- Graham, R.S. (1969). The music of language and the foreign accent. *The French Review*, 42(3), 445–451.
- Hall, R.A.Jr. (1972). Elgar and the intonation of British English. In D. Bolinger (Ed.). *Intonation: Selected readings* (pp. 282–285). Harmondsworth: Penguin Books. (Reprinted from “Elgar and the intonation of British English,” 1953, Gramophone, 31, 6.)
- Haynes, B., & Burgess, G. (2016). *The pathetick musician: Moving an audience in the age of eloquence*. New York: Oxford University Press.
- Hooker, L.M. (2013). *Redefining Hungarian music from Liszt to Bartók*. New York: Oxford University Press.
- Hui, T. (2020). *Melodramas of the tongue: Accented speech in literature, art, and theory* (Doctoral dissertation). Leiden University, Leiden, Netherlands. <https://hdl.handle.net/1887/136967>
- Keiler, A. (1978). Bernstein’s “The Unanswered Question” and the problem of musical competence. *The Musical Quarterly*, 64(2), 195–222. <https://www.jstor.org/stable/741445>
- Kubota, T. (1996). La la la love song [Song]. On La la la love thang. Sony Music; Japan.
- Novembre, G., & Keller, P.E. (2014). A conceptual review on action-perception coupling in the musicians’ brain: What is it good for? *Frontiers in Human Neuroscience*, 8, Article 603. <https://doi.org/10.3389/fnhum.2014.00603>
- Oxford University Press. (n.d.). Accent, n. In Oxford English dictionary. Retrieved September 1, 2025, from <https://doi.org/10.1093/OED/9494434378>
- Palmer, C., & Hutchins, S. (2006). What is musical prosody? *Psychology of Learning and Motivation*, 46, 245–278. [https://doi.org/10.1016/S0079-7421\(06\)46007-2](https://doi.org/10.1016/S0079-7421(06)46007-2)
- Patel, A.D. (2008). *Music, language, and the brain*. Oxford: Oxford University Press.
- Patel, A.D., & Daniele, J.R. (2003). An empirical comparison of rhythm in language and music. *Cognition*, 87(1), B35–B45. [https://doi.org/10.1016/S0010-0277\(02\)00187-7](https://doi.org/10.1016/S0010-0277(02)00187-7)
- Quantz, J.J. (1966). *On playing the flute* (E.R. Reilly, Ed. & Trans.). London: Faber and Faber. (Original work published 1752)
- Reiter, W.S. (2020). *The baroque violin & viola: A fifty-lesson course* (Vol. 1). New York: Oxford University Press. <https://doi.org/10.1093/oso/9780190922696.001.0001>
- Scharinger, M., & Wiese, R. (Eds.). (2022). *How language speaks to music: Prosody from a cross-domain perspective*. Berlin: De Gruyter.
- Sherman, B.D. (1997). *Inside early music: Conversations with performers*. New York: Oxford University Press.
- Steiner, G. (1975). *After Babel: Aspects of language and translation*. New York: Oxford University Press.

- Taruskin, R. (2023). *Musical lives and times examined: Keynotes and clippings, 2006–2019*. Oakland, California: University of California Press.
- Temperley, D. (2022). Music and language. *Annual Review of Linguistics*, 8, 153–170. <https://doi.org/10.1146/annurev-linguistics-031220-121126>
- Temperley, N., & Temperley, D. (2013). Stress-meter alignment in French vocal music. *The Journal of the Acoustical Society of America*, 134(1), 520–527. <https://doi.org/10.1121/1.4807566>
- The Juilliard School. (2016, January 7). Juilliard snapshot: Robert Mealy [Video]. YouTube. <https://www.youtube.com/watch?v=hIb9ygaTC0>
- The Strad. (2022, April 12). Technique: Speaking with the bow. The Strad. <https://www.thestrad.com/playing-hub/technique-speaking-with-the-bow/14614.article>
- Vanscheeuwijck, M. (2020). Violoncello and other bass violins in Baroque Italy. In D. Fabris (Ed.), *Gli esordi del violoncello: A Napoli e in Europa tra sei e settecento* (pp. 25–100). Barletta: Cafagna Editore.

GOVOREĆE GUDALO: LINGVISTIČKE REZONANCE U GUDAČKOM IZVOĐENJU

Apstrakt

Fenomen podsvesnog lingvističko-prozodijskog otiska proučavan je u muzičkoj kompoziciji (Patel & Daniele, 2003; Temperley, 2022), ali njegovo delovanje u izvođenju i dalje ostaje *terra incognita*. Ovaj jaz predstavlja prepreku za procenjivanje načina na koji izvorni fonetski obrasci prikriveno oblikuju „osećaj“ u muzičkom izrazu – idiosinkratično kodiran u artikulaciji. Kako bi se ispitala ova utelovljena interakcija, naša studija uvodi novu metodologiju koja koristi neuporedivu artikulacionu slobodu baroknog gudača da bi se destilovali jezički „ukusi“. Višejezične adaptacije pesme *La La La Love Song* Tošinobua Kubote služe kao fonetski šabloni za prevođenje prepoznatljivih prozodijskih obeležja – uključujući japanski visinski akcent, kantonske završetke slogova i engleski ritam zasnovan na naglasku – u ponovljive šeme gudačovanja. Preliminarne analize spektrograma ukazuju na to da se artikulacija gudača usklađuje sa izvornom prozodijom, naročito u izvođenju obojenom govorom. Na primer, spektralne osobine poteza Annera Bilsme odražavaju holandske grlene timbre dok oblikovanje tonova kod Ofeli Gajar replikuje pojačavanje francuskog završnog leksičkog naglaska. Predložene šeme nude nacrt za ispitivanje „izvornosti“ i „stranosti“ u izvođenju. Mapiranjem fonetskih obrazaca na gudačačke geste, ovaj rad pruža metod za analizu prožimanja izvorne prozodije u instinktivnom sviranju, usavršavajući izražajnu nameru kroz svesnu artikulaciju senzualnosti koja je inherentna jezičkom zvuku.

Ključne reči: govoreće gudalo, muzička artikulacija, lingvistički akustički obrasci, međuigra jezika i muzike, kulturna rezonanca