

# Title: Sustaining Authenticity: A Case Study of Vietnamese Traditional Music Across Genres Through Spectrograms

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The authenticity of traditional Vietnamese music is rapidly shifting towards Westernization, endangering its originality. This transformation is driven by various factors, including the influence of Western music symbols like the 5-line staff notation, against the nature of oral tradition, and the inherent transience of music, where each transmission alters its essence.

When attempting to perform current transcriptions with 5-line notation of traditional Vietnamese tunes from music books used in public schools, it feels like speaking English without vowel length or final consonants. This dilemma presents a crossroads, where we are torn between the need to simplify and standardize music education for broader accessibility and the temptation to embellish without truly grasping what is "authentically Vietnamese." This paper aims to address this challenge by examining Vietnamese traditional pieces through spectrograms, annotating whether certain features align with the style and sustain its authenticity, or if they reflect influence from other regional musical traditions.

Authenticity is defined here by practices embraced by both the masses and revered masters. To illustrate this, we utilize YouTube videos with millions of views as our primary data source due to its accessibility. These videos undergo analysis using tools like Sonic Visualiser, AnthemScore, and VoceVista. We deconstruct songs into phrases, visualize them through spectrograms, and seek commentary from traditional artists to determine what is considered authentic.

Our analysis encompasses elements such as non-tempered scales, frequencies of scale degree occurrences, microtonal ornamentations, melodic shapes, rubato, and phrasing. Findings are categorized to (1) identify commonalities and idiosyncrasies of popular traditional songs from their multiple versions, (2) catalog patterns across different musical genres, (3) superimpose these findings onto academically-circulated music sheets to demonstrate the loss of nuance in the 5-line notation (see attached image), and (4) highlight how Vietnamese tonal language and melodic elements seamlessly convey emotions and messages unique to Vietnamese culture and ways of life.

This paper adopts an interdisciplinary approach, drawing on expertise from traditional music experts who grew up immersed in the tunes of rural Vietnamese villages. In addition, it leverages the computational power of computers to analyze millions of spectrographic data points and incorporates knowledge from linguistic string analysis. Educators can use these insights to convey cultural significance to future generations and inspire students to explore these elements in their performances. Ultimately, this approach fosters and sustains awareness, promoting a deeper appreciation for our lesser-known cultural heritage.

