

Article

Structural Interculturalism and Organological Reform: The Seven-Tone Zheng “Zheng Xiaomeng” in Dialogic Practice with the Polish Suka

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Abstract: This study proposes the concept of structural interculturalism to examine how organological reform can function as a strategic foundation for sustainable cross-cultural musical dialogue. Focusing on the seven-tone reform of the Chinese guzheng—realized in the 18-string fixed configuration known as “Zheng Xiaomeng”—and its sustained collaboration with the Polish suka between 2021 and 2024, the article argues that intercultural performance requires structural compatibility at the level of instrument design rather than merely stylistic hybridity at the level of repertoire.

Drawing on organological analysis, performance ethnography, and repertoire-based musical examination, the study demonstrates how modal duality, harmonic redistribution, and timbre complementarity enable equitable tonal negotiation between pentatonic and diatonic systems. Through analyses of Chinese works, Chopin adaptations, Polish dance forms, and original compositions, the article illustrates how the seven-tone reform embeds dialogic capacity within the material architecture of the instrument itself.

By shifting analytical attention from hybrid outcomes to structural preconditions, the article contributes to emerging discussions on the role of organology in intercultural ethnomusicology and proposes structural interculturalism as a theoretical framework for national instrument reform in global contexts. It proposes structural interculturalism as a replicable theoretical framework for national instrument reform in global contexts.

Keywords: ethnomusicology; guzheng reform; organology; suka; interculturalism; musical hybridity; cross-cultural performance

1. Introduction: Instrument Reform and Intercultural Possibility

1.1 Global Circulation, Instrument Reform, and the Question of Structure

In contemporary intercultural performance practice, the language of hybridity has become dominant. Musical traditions meet, blend, and generate new stylistic forms under conditions of intensified global circulation. Yet beneath the surface of such hybridization lies a persistent structural question: how do instruments rooted in distinct tonal systems achieve sustainable coexistence without asymmetrical adaptation?

This article argues that intercultural musical dialogue depends not only on repertoire exchange or performative negotiation but on structural compatibility embedded within the organological design of instruments. To theorize this dimension, the concept of structural interculturalism is proposed—a framework that locates intercultural negotiation at the level of tuning architecture, pitch distribution, and acoustic engineering rather than solely at the level of stylistic outcome. The seven-tone reform of the Chinese guzheng offers a compelling case study. By reconfiguring a traditionally pentatonic instrument to incorporate fixed heptatonic distribution, the reform embeds modal duality within its material structure. This redesign enables the guzheng to engage diatonic systems without relinquishing pentatonic identity. Through sustained collaboration with the Polish suka from 2021 to 2024, this structural intervention was tested in performance, composition, pedagogy, and recording contexts.

1.2 Defining Structural Interculturalism

While scholarship on intercultural music frequently employs the concept of hybridity (Bhabha, 1994; Taylor, 1997), such approaches tend to emphasize the aesthetic products of cultural encounter. Structural interculturalism shifts the analytical lens toward material preconditions.

Structural interculturalism refers to the embedding of dialogic potential within the physical and tonal architecture of an instrument prior to intercultural encounter. Rather than adapting externally through performance technique alone, an instrument is internally reconfigured to accommodate multiple tonal systems. In this sense, structural interculturalism is both organological and epistemological: it reorders pitch distribution while enabling coexistence between distinct musical logics.

This concept responds directly to a recurring challenge in intercultural ensembles: modal asymmetry. When pentatonic instruments enter diatonically structured contexts, they often rely on compensatory techniques that render them structurally subordinate. By integrating heptatonic distribution into the guzheng's string layout, the seven-tone reform seeks to recalibrate this imbalance.

Structural interculturalism therefore differs from fusion aesthetics. It does not erase difference but reorganizes structural relations so that difference can operate dialogically rather than hierarchically.

1.3 Research Context and Significance

The empirical foundation of this study is the sustained collaboration between the reformed guzheng and the Polish suka, led by Professor Maria Pomianowska between 2021 and 2024. The suka, a reconstructed bowed chordophone rooted in Polish historical traditions, embodies a contrasting organological logic characterized by sustained tone production and diatonic orientation.

The encounter between these instruments provides an ideal site for examining structural negotiation. Both are nationally symbolic instruments; both carry strong cultural identities, yet they differ fundamentally in tuning architecture and sound production.

Rather than analyzing isolated performances, this research examines a multi-year collaborative ecology encompassing concerts, academic lectures, workshops, original compositions, and a commercially released recording project (AMBER & SILK PROJECT – Suka Meets Zheng, Pomianowska & Yu, 2023). This sustained engagement allows for longitudinal observation of structural adaptation and aesthetic negotiation.

To examine structural interculturalism empirically, this study addresses three central questions:

How does the seven-tone reform reorganize the modal and harmonic architecture of the guzheng at the organological level?

In what ways does this structural reconfiguration enable balanced tonal negotiation in intercultural performance with the Polish *suka*?

Can structural interculturalism serve as a replicable theoretical model for national instrument reform in global contexts?

1.4 Methodological Approach

Methodologically, this study integrates organological analysis, performance ethnography, and repertoire-based musical analysis. Data sources include instrument design documentation, rehearsal observation, performance recordings, compositional scores, and audience reception contexts across Polish venues.

The analytical framework proceeds in three stages. First, it examines the structural logic of the traditional pentatonic guzheng and the modal reconfiguration introduced by the seven-tone system. Second, it analyzes repertoire translation across Chinese, Polish, and original works performed between 2021 and 2024. Third, it theorizes structural interculturalism as a replicable framework.

By combining technical analysis with contextual interpretation, the study aligns with ethnomusicology's commitment to understanding music as both sound and social process.

2. Literature Review: Ethnomusicology, Organology, and Intercultural Performance

2.1 Instruments as Cultural Systems

Ethnomusicology has consistently emphasized that instruments function as cultural systems rather than neutral sound-producing devices. Nettl (1983) argues that musical structures reflect broader patterns of thought and social organization. Similarly, Feld (1996) introduces the concept of *acoustemology* to describe sound as a mode of knowing.

Within this framework, organological reform cannot be understood solely as technical innovation. Altering tuning systems or string distribution entails reconfiguring embedded epistemologies. The shift from pentatonic exclusivity to modal duality thus represents not only mechanical expansion but a reorientation of tonal cognition.

Chinese scholarship on guzheng reform has primarily focused on expanding range, increasing string numbers, or improving projection (Li, 2008; Zhou, 2015). While these innovations enhance performance capability, fewer studies have examined reform as an intercultural strategy.

2.2 Cross-Cultural Performance and the Politics of Adaptation

The literature on intercultural music-making often interrogates asymmetry. Taylor (1997) critiques world music markets for encouraging non-Western musicians to adapt to Western harmonic norms. Bhabha's (1994) concept of the "third space" offers a lens for understanding hybrid identities emerging through negotiation.

However, much scholarship focuses on stylistic blending rather than material redesign. Contemporary scholarship has increasingly emphasized sensory experience, embodiment, and global circulation in contemporary ethnomusicology. Studies within the field of sensory ethnomusicology explore how listening practices, timbral perception, and embodied musical interaction shape intercultural musical encounters (Rice, 2020; Stobart, 2021). At the same time, research on global music circulation highlights how instruments and performance practices are continually recontextualized through transnational networks of collaboration and cultural diplomacy (Schippers & Grant, 2016; Nooshin, 2022). These perspectives reinforce the need to

examine not only stylistic outcomes but also the structural and material conditions that enable intercultural musical exchange. Instruments are frequently treated as stable carriers of tradition, even when repertoire becomes hybridized.

Recent work on intercultural chamber music suggests that sustainable dialogue requires deeper structural compatibility (Zheng, 2018). Timbre complementarity, tuning negotiation, and role redistribution become critical variables.

The present study extends this discourse by foregrounding organological reform as a precondition for equitable intercultural exchange.

2.3 Chinese Instrument Modernization in the Global Context

Since the twentieth century, Chinese national instruments have undergone multiple waves of modernization aimed at expanding expressive range and ensemble compatibility. These reforms often respond to orchestral standardization and global circulation.

Yet modernization has typically prioritized internal national orchestration rather than intercultural chamber dialogue. The seven-tone reform differs in orientation: its goal is not merely to integrate into Chinese large ensembles but to facilitate balanced interaction with non-Chinese tonal systems.

By situating this reform within the broader trajectory of Chinese instrument modernization, the study highlights a shift from national consolidation to transnational negotiation. Recent discussions of Sino-European musical exchange further highlight the importance of structural adaptation in intercultural collaboration. Zhou (2024), reflecting on cross-cultural musical encounters between Chinese and Polish musicians, emphasizes that meaningful intercultural dialogue often emerges through practical experimentation in performance, where musicians negotiate differences in tonal systems, aesthetic expectations, and performance conventions. Such perspectives resonate with the present study, which situates instrument reform as a structural strategy enabling intercultural communication.

2.4 Toward an Organological Turn in Intercultural Theory

The preceding literature reveals a gap. While ethnomusicology richly theorizes hybridity, globalization, and soundscape, less attention has been paid to the material redesign of instruments as sites of intercultural strategy.

This study argues for an “organological turn” within intercultural theory—an analytical shift that recognizes instrument construction, tuning architecture, and acoustic engineering as central to cultural negotiation. Structural interculturalism emerges from this turn.

The next section examines how such reform materializes in the seven-tone guzheng and prepares the ground for sustained dialogue with the Polish *suka*.

3. The Seven-Tone Reform as Organological Reconfiguration

3.1 Historical Modal Architecture of the Traditional Guzheng

Any meaningful assessment of the seven-tone reform must begin with a precise understanding of the modal architecture embedded in the traditional guzheng. The conventional 21-string instrument, typically configured within a pentatonic framework, is structurally oriented toward melodic primacy rather than harmonic verticality. Its tuning layout privileges scalar openness, and its expressive grammar relies heavily on left-hand pitch bending, vibrato, and sliding inflections to articulate modal nuance (Zhou, 2015).



Figure 1. The reformed seven-tone guzheng “Zheng Xiaomeng” performed by Mingjie Yu.

Within this design, scalar completion is achieved not through fixed pitch distribution but through performative adjustment. The absence of two diatonic degrees in the default string arrangement reflects a tonal epistemology in which melodic contour, rather than harmonic progression, governs structural coherence. Nettl (1983) reminds us that musical systems embody cultural logic; thus, the pentatonic orientation of the guzheng encodes a worldview in which fluidity and modal transformation supersede functional harmonic movement.

However, when entering intercultural ensemble contexts shaped by equal temperament and chord-based syntax, this architecture generates structural friction. Frequent left-hand inflection introduces instability in passages requiring harmonic precision. Ensemble coordination becomes asymmetrical, with the guzheng adapting continuously to the tonal stability of Western instruments. The reform of “Zheng Xiaomeng” must therefore be understood as a response to modal asymmetry rather than as aesthetic abandonment.

It should be emphasized that the seven-tone reform is not intended to replace the traditional 21-string guzheng or its established repertoire. Rather, it functions as a supplementary organological configuration designed for specific intercultural contexts. The traditional pentatonic guzheng continues to represent the core historical and aesthetic lineage of the instrument, while the seven-tone system serves as a cross-cultural tool that enables dialogue with diatonically structured musical systems. In this sense, the reform expands the instrument’s functional ecology rather than redefining its tradition.

3.2 Modal Duality and the Reorganization of Pitch Function

The 18-string fixed seven-tone system fundamentally reorganizes pitch function within the instrument. By embedding the complete heptatonic scale directly into the string layout, the reform eliminates the need for compensatory pitch bending in diatonic passages. Yet this structural addition does not displace pentatonic logic; instead, it creates modal duality.

Modal duality permits the instrument to operate simultaneously within two scalar paradigms. Pentatonic passages retain traditional ornamentation and timbral shading, while diatonic passages gain structural stability. This dual functionality transforms the guzheng from a monomodal instrument into a polymodal mediator capable of navigating intercultural repertoire without mechanical compromise.

The redistribution of functional responsibility between the hands is particularly significant. In traditional practice, the left hand primarily modifies pitch microtonally. In the seven-tone

configuration, the left hand increasingly participates in harmonic articulation, supporting chordal structures and counter-melodies. This shift reflects a reallocation of performative labor within the instrument itself, expanding its vertical architecture without negating its horizontal expressivity.

3.3 Harmonic Expansion and Vertical Density

Harmonic implications of the reform extend beyond mere scalar completion. Traditional guzheng textures often imply harmonic progression through broken-chord figuration rather than stable triadic articulation. The seven-tone system permits the formation of triads, dominant–tonic relationships, and contrapuntal layering without retuning. As Li (2008) observes, expanded string configurations increase vertical density and compositional flexibility.

In practical terms, this expansion enables the guzheng to assume harmonic scaffolding roles previously reserved for chordal instruments such as piano or guitar. During ensemble performance, it can now sustain harmonic progression independently rather than merely embellish melodic lines. The instrument's capacity for polyphonic layering introduces new possibilities for intercultural chamber textures.

This harmonic transformation must not be misinterpreted as Westernization. Rather, it constitutes a structural negotiation that allows harmonic dialogue to coexist with traditional timbral articulation. The reform expands modal literacy while preserving aesthetic identity.

3.4 Acoustic Engineering and Timbre Calibration

Structural reform also required acoustic recalibration. The optimization of the paulownia resonance body enhances mid-frequency warmth, softening the sharp attack characteristic of traditional projection (Cao, 2017). String tension adjustments moderate transient intensity, enabling smoother blending with sustained bowed timbres.

From an acoustical perspective, the reform alters the sound envelope of the instrument. While maintaining plucked articulation, it extends perceived sustain and reduces excessive percussive dominance. This recalibration is crucial for ensemble integration with the suka, whose bowed sustain operates within a fundamentally different temporal logic.

Organological reform thus operates at multiple levels—modal, harmonic, and acoustic—collectively preparing the instrument for dialogic coexistence.

Having examined the structural reconfiguration of the instrument, the following section turns to its practical realization in intercultural performance contexts.

4. Cross-Cultural Practice in Poland: Dialogic Performance as Method

4.1 Performance Contexts and Cultural Framing (2021–2024)

Between September 2021 and July 2024, the collaboration with Professor Maria Pomianowska unfolded across concert halls, museums, universities, Confucius Institutes, and music festivals in Warsaw, Kraków, and other Polish cities. Each venue constituted a distinct interpretive framework.

In concert halls, the collaboration was positioned as artistic innovation. Within Confucius Institutes, it functioned as cultural diplomacy. University contexts framed it as an academic exchange, while festivals emphasized intercultural spectacle. These layered settings shaped audience reception and contributed to what may be termed a performance ecology—an interconnected network in which musical meaning is co-produced by venue, discourse, and audience.

This ecological dimension situates the project within broader intercultural circulation rather than isolated performance events.

4.2 Repertoire Translation: Chinese Works in Polish Context

The reinterpretation of the Zhiqing Tomb exemplifies structural negotiation. Originally pentatonic, the piece foregrounds lyrical melody supported by minimal harmonic density. In its seven-tone reinterpretation, harmonic layering was introduced beneath the sustained suka line. Arpeggiated triadic support enriched the tonal field while tremolo and glissando preserved Chinese expressive markers.

Passing tones and expanded voicings increased vertical density without displacing modal identity. The result was a negotiated texture—neither fully traditional nor assimilated into Western harmonic syntax. The seven-tone system enabled harmonic enrichment while maintaining melodic primacy.

Similar approaches were applied to *Butterfly Lovers*, *Spring River in the Flower Moon Night*, and *Jasmine Flower*, where harmonic scaffolding facilitated intercultural intelligibility without aesthetic dilution.

4.3 Polish Repertoire and Harmonic Negotiation

Chopin adaptations required deeper harmonic translation. Functional progression and chromatic nuance were articulated through broken-chord patterns that approximated pianistic motion while remaining idiomatic to plucked articulation. The left hand retained vibrato and pitch shading to preserve Chinese timbral identity.

A brief comparison with the traditional pentatonic zheng illustrates this structural advantage. In passages derived from Chopin's harmonic language—particularly sequences involving dominant-tonic motion or secondary dominants—the seven-tone configuration allows stable articulation of complete triads without continuous left-hand pitch bending. For example, in several adapted passages corresponding to typical Chopin harmonic progressions (e.g., ii-V-I patterns in measures adapted from Chopin's lyrical works), the right hand can outline the harmonic framework through broken-chord figuration while the left hand supports sustained tones or ornamental inflection. On a traditional pentatonic zheng, such passages would require frequent pitch inflection to approximate missing scale degrees, resulting in instability in ensemble coordination. The fixed heptatonic distribution therefore enables harmonic clarity while maintaining idiomatic plucked articulation.

Dance forms such as *Polonaise* and *Mazur* required rhythmic precision. The guzheng reinforced metric accents through articulated plucking, while the suka sustained melodic arcs. In faster forms such as *oberek*, tempo elasticity demanded real-time negotiation between decay-based and sustain-based sound production. Temporal coordination became as significant as harmonic alignment.

Repertoire translation thus unfolded across melodic, harmonic, and rhythmic dimensions.

4.4 Original Composition as Intercultural Laboratory

Original works—including *VARIANT/JOY*, *JOURNEY*, and *Desert*—extended beyond adaptation into synthesis. *Desert*, themed around the Silk Road, employed both reconfigured pentatonic and seven-tone guzhengs alongside the suka. In the composition *Desert*, harmonic textures occasionally move beyond pentatonic implication toward diatonic expansion. In sections where sustained suka lines outline modal centers while the zheng provides arpeggiated harmonic support, the seven-tone configuration allows the articulation of complete triadic or quartal sonorities that would be structurally incomplete on the traditional pentatonic instrument. This capability enables smoother modulation between modal areas and supports layered textures in which plucked harmonic patterns interact with sustained bowed timbres. The example demonstrates how structural modification at the organological level directly

expands compositional possibilities in intercultural repertoire. This coexistence dramatized continuity and transformation within a single composition.

Several original works created during the collaboration (Dragon Soaring, Cloud Dance, Morning Light, etc.) integrated lived experience in Poland with expanded harmonic vocabulary (Wang, 2019). These compositions functioned as experimental spaces in which structural interculturalism was tested beyond existing repertoire constraints.

The 2023 CD *AMBER & SILK PROJECT – Suka Meets Zheng* (Pomianowska & Yu, 2023), positively reviewed by Baruch (2023), institutionalized these experiments within recorded media, extending intercultural dialogue into archival circulation.

These sustained practices provide the empirical foundation for theorizing structural interculturalism as a broader model of organological mediation.

5. Structural Interculturalism: Toward a Theoretical Model of Organological Mediation

5.1 From Hybridity to Structural Grounding

The sustained collaboration between the seven-tone guzheng and the Polish suka reveals that intercultural music-making cannot be fully explained by the language of hybridity alone. Hybridity, as theorized by Bhabha (1994), describes the emergence of cultural forms within a “third space” of negotiation. Taylor (1997), meanwhile, critiques global fusion practices for masking asymmetrical adaptation beneath the rhetoric of diversity. Both frameworks illuminate important dimensions of intercultural production; however, they primarily describe outcomes at the level of stylistic representation rather than the material conditions that make such outcomes possible.

The present case suggests that sustainable intercultural dialogue requires attention to structural preconditions. Before stylistic hybridity can occur equitably, instruments must be capable of inhabiting shared tonal space without disproportionate compromise. In many cross-cultural ensembles, non-Western instruments shoulder the burden of adaptation through extended technique or retuning. The seven-tone reform alters this dynamic by embedding diatonic compatibility within the instrument itself prior to intercultural engagement.

Structural interculturalism thus differs from hybridity in temporal orientation. Hybridity analyzes what emerges after encounter; structural interculturalism examines what makes encounter structurally viable. It foregrounds material design as the groundwork for dialogic possibility.

5.2 Modal Duality as Epistemological Bridge

At the heart of this model lies modal duality. By incorporating heptatonic distribution while retaining pentatonic flexibility, the seven-tone guzheng embodies two tonal epistemologies within a single organological body. Nettl (1983) reminds us that scales are not merely pitch collections but systems of musical thought. Pentatonic logic privileges melodic contour and modal fluidity; diatonic logic facilitates harmonic progression and functional tonality.

In the reinterpretation of *Zhiqing Tomb*, modal duality enabled harmonic layering beneath the lyrical pentatonic melody without destabilizing its expressive grammar. The guzheng could articulate triadic support while preserving tremolo and glissando as culturally marked gestures. In Chopin adaptations, the same duality allowed the instrument to approximate functional harmonic motion while maintaining Chinese vibrato techniques. These examples demonstrate that modal duality operates as an epistemological bridge, not as tonal substitution.

Rather than replacing pentatonic identity with diatonic conformity, the reform enables coexistence. This coexistence reduces modal friction and redistributes adaptive labor across the ensemble. The suka, grounded in diatonic orientation, no longer functions as a tonal anchor to

which the guzheng must constantly adjust; both instruments participate in shaping harmonic space.

5.3 Timbre Complementarity and Acoustic Politics

Structural interculturalism extends beyond pitch organization to acoustic interaction. Zheng (2018) argues that successful intercultural ensembles depend on timbre complementarity rather than timbre homogenization. The guzheng's plucked articulation generates rhythmic and harmonic nodes, while the suka's sustained bowing produces melodic continuity. Their interaction forms what may be described as a point-line texture: discrete plucked attacks punctuate continuous bowed sound.

This complementarity becomes especially evident in Polish dance forms such as Polonaise and Oberek. In fast-tempo sections, the guzheng reinforces metric accents through percussive articulation, while the suka sustains melodic arcs above rhythmic scaffolding. Temporal negotiation replaces hierarchical accompaniment. Each instrument retains its acoustic identity while contributing structurally distinct functions.

From a cultural perspective, such complementarity resists the homogenizing impulse often embedded in global fusion aesthetics. Instead of blending timbres into indistinction, the ensemble foregrounds difference as a structural resource. Acoustic politics here operates through calibrated interdependence.

It should also be noted that the structural balance within the collaboration does not imply identical forms of adaptation. The Polish suka, as a diatonically oriented instrument, already contains the pitch material necessary to accommodate pentatonic structures and therefore does not require organological modification when engaging with Chinese repertoire. Instead, its adjustment occurs primarily at the level of musical expression and phrasing. In passages derived from Chinese pentatonic works, the suka often moderates vibrato width, adjusts bow pressure, and shapes melodic phrasing to mirror the flexible contour characteristic of traditional Chinese instrumental aesthetics. In this sense, while the guzheng undergoes structural modification to achieve tonal compatibility, the suka participates in the intercultural negotiation through expressive recalibration. The resulting interaction preserves equality not through identical transformation but through complementary forms of adaptation.

5.4 Repertoire Translation and the Redistribution of Musical Agency

Another dimension of structural interculturalism concerns repertoire translation. Translation is not merely the transfer of melody between instruments but the redistribution of musical agency within ensemble structure. In traditional guzheng performance, harmonic implication often remains secondary to melodic elaboration. The seven-tone reform reassigns harmonic responsibility to the guzheng in intercultural settings.

During Chopin adaptations, broken-chord textures approximating pianistic accompaniment patterns were rendered idiomatically through plucked articulation. The guzheng did not imitate the piano; it translated harmonic logic into its own performative vocabulary. This distinction is crucial. Imitation risks assimilation; translation preserves agency.

Original compositions such as *Desert* further illustrate agency redistribution. The coexistence of pentatonic and seven-tone guzhengs within a single work dramatizes internal plurality. The instrument becomes not a passive recipient of intercultural influence but an active shaper of sonic architecture. Structural interculturalism thus empowers the national instrument to participate in global dialogue on negotiated terms.

5.5 Toward a Multi-Layered Model of Structural Interculturalism

Drawing from the foregoing analysis, structural interculturalism may be conceptualized as operating across four interrelated layers, summarized in Table 1.

Table 1. Multi-layered structure of structural interculturalism

Layer	Primary Focus	Function in Intercultural Collaboration
Organological Layer	Instrument design, tuning architecture, acoustic engineering	Enables structural compatibility between different tonal systems
Performative Layer	Redistribution of technical roles and ensemble interaction	Facilitates balanced negotiation between instrumental traditions
Repertoire Layer	Translation and adaptation of musical works	Allows culturally distinct repertoires to be performed within a shared tonal framework
Institutional Layer	Concerts, recordings, pedagogy, academic discourse	Stabilizes and disseminates intercultural practice within cultural infrastructure

Table 1 summarizes the four analytical layers through which structural interculturalism operates, illustrating how organological design, performance practice, repertoire translation, and institutional circulation interact to sustain intercultural musical dialogue.

These layers are mutually reinforcing. Organological reform enables performative redistribution; performative redistribution facilitates repertoire translation; repertoire translation gains legitimacy through institutional dissemination. The AMBER & SILK PROJECT – Suka Meets Zheng recording (Pomianowska & Yu, 2023) exemplifies the institutional layer by archiving and circulating the results of structural negotiation.

By articulating these layers, the model moves beyond anecdotal collaboration toward theoretical generalization.

5.6 Implications for Ethnomusicology

For ethnomusicology, this case underscores the necessity of integrating organology more centrally into intercultural theory. Instruments are often treated as stable representatives of tradition, while repertoire and performance practices are analyzed as sites of change. The seven-tone reform demonstrates that material redesign itself constitutes cultural discourse.

Moreover, structural interculturalism challenges the binary of preservation versus modernization. The reform neither fossilizes pentatonic tradition nor dissolves it into global tonality. Instead, it constructs a dialogic infrastructure within which multiple tonal epistemologies can coexist. This perspective aligns with contemporary calls for relational rather than oppositional models of cultural identity.

In sum, structural interculturalism reframes intercultural music-making as a process grounded in material design, epistemological negotiation, and institutional stabilization. It offers a theoretical lens through which future reforms of Chinese national instruments—and indeed other modal traditions worldwide—may be examined.

6. Conclusion: Organology as Intercultural Strategy

The reform of the seven-tone guzheng and its sustained collaboration with the Polish suka demonstrate that intercultural musical dialogue can be structurally embedded rather than superficially enacted. This study began by identifying a persistent dilemma: national instruments rooted in modal traditions often encounter structural limitations when engaging harmonic systems shaped by equal temperament and functional tonality. Rather than treating this dilemma as an inevitable asymmetry to be compensated for through performative adaptation, the seven-tone reform addresses it at the level of organological architecture.

By integrating heptatonic distribution into the string configuration while preserving pentatonic flexibility, the reform establishes modal duality within a single instrument. This duality allows the guzheng to operate across tonal systems without abandoning its aesthetic identity. The instrument becomes capable of harmonic articulation, contrapuntal layering, and rhythmic precision in intercultural settings, yet it retains the gestural and timbral characteristics that define its cultural lineage.

The empirical analysis of performances in Poland between 2021 and 2024 further demonstrates that structural compatibility transforms the dynamics of intercultural collaboration. In repertoire translation—from Zhiqing Tomb to Chopin adaptations and Polish dance forms—the seven-tone system reduces modal friction and enables balanced ensemble negotiation. In original compositions, the coexistence of pentatonic and heptatonic configurations dramatizes continuity and innovation within a single sonic field. These practices illustrate that intercultural dialogue is most sustainable when material design supports reciprocal exchange.

The concept of structural interculturalism proposed in this study advances ethnomusicological discourse in three ways. First, it shifts analytical attention from stylistic hybridity to material preconditions. While hybridity remains a valuable descriptor of musical outcomes (Bhabha, 1994; Taylor, 1997), structural interculturalism foregrounds the infrastructural groundwork that makes equitable hybridity possible. Second, it calls for an organological turn in intercultural theory, recognizing instrument construction, tuning architecture, and acoustic engineering as sites of cultural politics. Instruments do not merely carry tradition; they actively shape the terms of encounter. Third, it provides a replicable methodological framework applicable beyond the guzheng–suka collaboration. Diagnosing modal incompatibilities, redesigning tonal architecture, cultivating repertoire translation, and institutionalizing dialogue through pedagogy and recording constitute a strategic sequence for intercultural sustainability.

From a broader perspective, this case also reframes modernization within Chinese instrumental culture. Twentieth-century reforms often prioritized orchestral standardization and internal national consolidation. The seven-tone reform signals a shift toward transnational adaptability grounded in structural agency. Rather than diluting tradition in pursuit of global accessibility, it demonstrates that internal redesign can preserve cultural specificity while expanding dialogic capacity.

At the same time, structural reform does not eliminate cultural differences; nor should it. The collaboration between guzheng and suka reveals that productive interculturalism depends not on homogenization but on calibrated complementarity. The plucked articulation of the guzheng and the sustained bowing of the suka maintain distinct acoustic identities. Their interaction generates a point-line texture in which difference becomes the condition for coherence. Such complementarity aligns with ethnomusicology's broader commitment to plurality and relationality (Nettl, 1983).

Future research may extend this framework in several directions. Comparative studies could examine whether similar organological reforms in other Chinese instruments—such as the pipa or erhu—facilitate comparable intercultural integration. Acoustic measurement and psychoacoustic analysis could further quantify timbral blending and harmonic stability in cross-cultural ensembles. An ethnographic inquiry into audience reception across different cultural contexts would also deepen understanding of how structural reform shapes listening practices.

Ultimately, this study suggests that intercultural music-making is not only a matter of repertoire selection or performative goodwill. It is a question of structural design. When instruments are reconfigured to accommodate multiple tonal epistemologies, they become

mediators rather than adapters. The seven-tone guzheng examined in this study exemplifies how material innovation can expand the expressive horizon of national instruments while safeguarding their cultural integrity.

In this sense, organology emerges not merely as a technical discipline but as a strategic site of intercultural imagination. The future of global musical dialogue may depend as much on the redesign of instruments as on the circulation of sounds.

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