

Universidade de Évora - Instituto de Investigação e Formação Avançada

Programa de Doutoramento em Música e Musicologia

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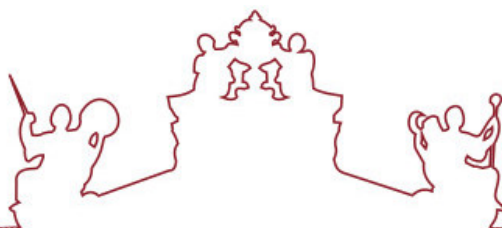
HYBRIDIZATION IN MUSIC THROUGH THE LANGUAGE OF TABLA APPLIED ON JAZZ DRUMS REPERTOIRE

Federica Bernabei

Orientador(es) | Eduardo Lopes
Martin Clayton

Évora 2026





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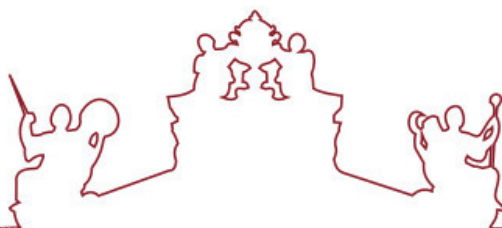
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A tese de doutoramento foi objeto de apreciação e discussão pública pelo seguinte júri nomeado pelo Diretor do Instituto de Investigação e Formação Avançada:

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I dedicate this work to my family, to my grandparents Andrea and Adelina, for all the love, understanding, and support they have always given me.

To Nuccio, an invaluable helper who supported and encouraged me when writing and performing seemed impossible.

Last but not least, to myself.

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HIBRIDIZAÇÃO NA MÚSICA ATRAVÉS DA LINGUAGEM DA TABLA APLICADA AO REPERTÓRIO DE BATERIAS DE JAZZ

Resumo

Esta tese de doutoramento centra-se na música híbrida e no seu contexto cultural. O seu objetivo é fundir dois instrumentos rítmicos: a tabla e a bateria. A pesquisa iniciar-se-á pela interpretação da linguagem da tabla e a sua aplicação à bateria, sob perspetivas melódicas e rítmicas.

O núcleo do projeto centra-se na criação, adaptação e manipulação de elementos da linguagem tabla através da bateria, promovendo uma nova perspetiva sobre o ritmo e a melodia. Explorarei o jazz, um género que reflete a minha formação e permite uma interação dinâmica com a intrincada linguagem da música clássica hindustani.

Incorporarei frases e padrões rítmicos característicos da língua tabla. Estas frases e padrões concisos e repetitivos são ideais para inclusão no repertório de jazz para acompanhamento e improvisação.

Esta investigação visa aplicar o conceito híbrido, indo além dos limites e abordando os problemas que possam surgir. Propõe uma nova perspetiva que me permitirá, enquanto músico, abordar a performance com naturalidade, recorrendo a metodologias científicas e performativas. Gostaria que este trabalho inspirasse uma abordagem didática e metódica que se distanciasse do treino convencional. Ao envolver percussionistas interessados em linguagens melódicas e rítmicas alternativas, os seus instrumentos podem servir como ferramentas para a exploração criativa, levando-os para além das estruturas familiares. Isto pode desafiar os intérpretes, como aconteceu comigo, a repensar o potencial expressivo dos seus instrumentos, a abraçar novas perspetivas e a alargar os seus limites técnicos e artísticos.

Abstract

This Ph.D. thesis focuses on hybrid music and its cultural context. It aims to merge two rhythmic instruments: the tabla and drums. The research will begin by interpreting the tabla's language and applying it to the drums from melodic and rhythmic perspectives.

The project's core focuses on creating, adapting, and manipulating elements of tabla language through the drums, fostering a new perspective on rhythm and melody. I will explore jazz music, a genre that reflects my background and enables a dynamic interplay with the intricate language of Hindustani classical music.

I will incorporate phrases and rhythmic patterns characteristic of the Tabla language. These concise, loopable phrases and patterns are ideally suited for inclusion in the jazz repertoire for comping and improvisation.

This research aims to apply the hybrid concept, going beyond the limits and addressing the problems that may arise. It proposes a new perspective that will enable me, as a musician, to approach performance naturally, drawing on both scientific and performative methodologies.

I would like this work to inspire a didactic, methodical approach that moves away from conventional training. By involving percussionists interested in alternative melodic and rhythmic languages, their instruments can serve as tools for creative exploration, pushing them beyond familiar frameworks. This can challenge performers, as it has for me, to rethink the expressive potential of their instruments, embrace new perspectives, and expand their technical and artistic boundaries.

Keywords: Drumset, Tabla, Hindustani music, Jazz, Music crossover

Statement of Originality

This work has not yet been submitted for a degree or diploma at any university. The thesis does not contain material previously published or written by another person, except where due reference is made in the thesis itself.



Motivation

I need to provide some context to clarify my motivation for this research. My artistic journey began with jazz studies, which I blended with Latin music, particularly Brazilian music, during my Master's program at Codarts in Rotterdam.

A few years before, I participated in tala rhythm classes taught by tabla player Niti Rajan Biswas. Although the tabla was an unfamiliar instrument, I found the realm of Indian classical music genuinely captivating.

What intrigued me about the tabla was its rich and diverse musical grammar compared to percussion instruments. Specifically, I am fascinated by the organizational system in Indian classical music, which structures improvisation and composition with its own logic, distinct from Western systems. I refer to two instruments, the tabla and the drums, with unique sound ranges. In my studies, I found it enriching to consider rhythm not just rhythmically but musically, consciously choosing sounds rather than merely playing learned patterns, which I found particularly intriguing.

Moreover, the grammar of tabla is enhanced by various sounds, such as open and closed sounds, fingertip strikes, palm taps, and wrist slides on the bayan, which create a glissando. I was especially drawn to how much variety could be generated from just two small drums and the entire musical universe, which was previously unknown to me.

This ignited a sustained passion for Indian classical music, beginning with my curiosity to learn the tabla and evolving into experimentation with the Indian language applied to drums and Brazilian music, notably the Maracatu de baque virado. Consequently, in my Master's artistic research, I integrated a specific composition from the Indian tradition into a Maracatu song and was pleasantly surprised to discover related rhythmic elements.

Exploring music from various cultures enriches my understanding of existing concepts and helps me acquire new ones, greatly enhancing my musical vocabulary. For instance, learning the tabla added a fresh perspective to my approach to music and rhythm. It introduced me to new skills and techniques, revealing multiple ways to engage with the drums. I seek a learning experience that challenges me and pushes my boundaries.

Therefore, I aim to continue this exploration and provide drummers interested in this approach with a new foundation for study and inquiry. What impressed me most about the tabla was its remarkable technical proficiency, versatility in improvisation, and freedom for self-expression in any context. I aspire to achieve this kind of expressive freedom in my drumming.

The language of the tabla and my drumming knowledge have provided an excellent medium for deepening my musical understanding and connecting with fellow musicians. The tabla's fluidity and changing character have captivated me, creating compelling rhythmic patterns that intricately form various simultaneous rhythmic structures.

This research journey prompted me to explore necessary questions and doubts about the challenge of blending two languages and distinct musical worlds.

Specifically, I aspire to allow the drums to convey melodies, sounds, and cycles uniquely, moving beyond their role as mere rhythm keepers. The cycle ultimately leads to the melody. Consider how Indian classical music, particularly the tabla's technical and stylistic nuances, can be translated and expressed through drums, which carry their own history and rules.

Subsequently, how might we adapt this result to fit within a Western musical context, such as jazz? Does the transition to a different culture also lead to any loss of elements? Is it a loss, or could it be seen as an opportunity for alternatives?

Building on these reflections, I formulated several questions framing my artistic exploration. The following research questions arise:

How can I adapt and expand the tabla's language on drums, emphasizing its unique rhythmic and melodic traits by specifically reworking specific traditional phrases and compositions? Additionally, how can these aspects be incorporated into the jazz instrumental repertoire for comping and improvisation?

Introduction to the Research Project

This thesis posits that the rhythmic hybridization of tabla and Western percussion traditions serves as a transformative tool in cross-cultural music, fostering innovation while preserving the integrity of distinct rhythmic traditions. By examining historical exchanges, performance practices, and my creative process, this work highlights how Indian rhythmic concepts can be meaningfully integrated into Western percussion practices without reducing them to mere embellishments or imitative gestures. The central argument guiding this research is that adaptation is not a passive act of borrowing but an active process of reinvention, generating new rhythmic possibilities and enriching both traditions through dialogue rather than dilution.

This project will utilize percussive instruments such as drums and tabla, integrating techniques and rhythmic patterns from both traditions to create a distinctive musical language. It will undoubtedly address issues of social and intercultural hybridization. The aim is to outline the creative process of learning, adapting, and incorporating new musical elements into existing practices while proposing a fresh method for exploring paths in musical development research.

A recurring theme throughout this work is the negotiation between preservation and innovation. In adapting tabla techniques to drums, I have sought to develop a rhythmic language that honors the depth of Indian rhythm while making it accessible and relevant in a Western drum context. This thesis argues that such hybridization, rather than creating a diluted fusion, requires a rigorous engagement with multiple rhythmic systems, pushing musicians to transcend inherited structures and develop a genuinely intercultural rhythmic identity.

Integrating Indian rhythmic traditions into Western music education has led to remarkable transformations in how rhythm is taught, conceptualized, and embodied. One of the most significant contributions stems from the oral-aural pedagogy central to Indian classical music, particularly within the tradition of the tabla. Unlike the Western emphasis on notation, Indian pedagogy relies on memorization, improvisation, and a profound internalization of cyclical time. This method fosters greater rhythmic awareness by training students to think and feel in cycles rather than linear beats or phrases. This oral-transmission approach, rooted in vocalized rhythmic syllables (bols in the North Indian tradition and

Solkattu in the South Indian tradition), encourages an embodied understanding of rhythm that enhances the fluidity of improvisation.

For Western percussion, incorporating tabla concepts such as *Tihais*, *kaidas*, and *tala* cyclical thinking introduces a more nuanced vocabulary, deepens improvisational approaches, and challenges drummers to think beyond linear temporal structures. In contrast, the tabla tradition is enriched through its recontextualization on the drum set, gaining access to expanded timbral palettes, new performance environments, and cross-cultural dialogues that stimulate creative reinterpretation. Thus, rather than compromising cultural integrity, this process revitalizes the tradition by allowing its core principles to evolve in unfamiliar yet artistically fertile terrain. In this sense, rhythmic hybridization is not a unilateral act of borrowing but a dynamic exchange that stimulates innovation, honors legacy, and opens paths for future rhythmic exploration.

This research examines rhythmic hybridity as a generative force in contemporary music-making, one that transcends simple fusion by fostering new rhythmic idioms through the creative intersection of tabla and Western percussion traditions. Rather than simply combining disparate elements, this thesis positions hybridity as an artistic strategy that challenges and expands conventional rhythmic vocabularies. While the primary goal is to illuminate the compositional and performance potential of such hybrid forms, this exploration inevitably touches on broader cultural dynamics. It invites reflection on whether hybrid practices can serve as sites of mutual reinforcement and exchange or whether they risk reproducing imbalances inherent in global cultural flows. Additionally, how audiences perceive and interpret hybrid rhythmic languages is acknowledged. Although outside the scope of this thesis, these questions highlight the complexity and significance of rhythmic hybridity in the global musical landscape, suggesting fertile ground for future research. I aim to blend different musical styles, such as jazz and Indian classical music, rhythmically and melodically, to reveal their connections, particularly in rhythm.

Recent studies further emphasize the pedagogical value of Indian techniques. Michael Bakan (2012) and ethnomusicologist Sarah Weiss (2006: 506-522) have both observed that incorporating *solkattu* into Western rhythm training significantly improves students' rhythmic accuracy and improvisational skills, highlighting performance, confidence,

and long-term learning relationships —qualities increasingly recognized as advantageous in Western conservatory contexts. Thus, Indian rhythmic traditions are not merely added to the academic curriculum but also catalysts for rethinking rhythm within Western music education.

Moreover, scholars such as Michael Tenzer (2006: 92–96) emphasize the importance of balancing tradition and innovation, warning that uncritical adoption of non-Western elements can lead to misrepresentation rather than meaningful incorporation.

My research builds on this, arguing that rhythmic hybridization is most effective when approached as an interactive process rather than a static borrowing of techniques.

My research builds on these perspectives by arguing that rhythmic hybridization between tabla and Western percussion traditions is not simply a matter of stylistic fusion but an interactive process. It challenges inherited rhythmic frameworks and opens up innovative avenues for creative and educational practices. When approached with critical awareness and cultural sensitivity, this hybridization becomes a transformative tool that enriches both traditions through dialogue.

Adapting tabla patterns to drums is an example of this interactive process. While some musicians, such as Bernhard Schimpelsberger, prioritize the rhythmic integrity of tabla cycles without translating the exact sonorities, others, such as Dan Weiss, explore how the entire range of drum sounds can reflect tabla articulations. This demonstrates that rhythmic hybridization does not yield a single outcome but instead opens up multiple creative paths, depending on the musician's goals and sensibilities.

Concepts of authenticity, as discussed by Whyton (2010), become particularly relevant in this discourse. The assumption that tabla must remain within its traditional framework to be "authentic" overlooks the reality that musical traditions have continuously evolved through interaction. In this sense, my approach to adapting tabla rhythms to drums is not a departure from tradition but a continuation of its inherent flexibility and improvisational spirit.

From a practical perspective, this research suggests that rhythmic hybridization can expand rhythmic literacy in Indian and Western musical contexts. For Western drummers, exposure to Indian rhythmic cycles,

named *Tala* (or *Taal*)¹, offers new ways of conceptualizing timing and phrasing. For Indian percussionists, engagement with Western drumming techniques can provide new perspectives on timbre and coordination. This two-way exchange underscores the pedagogical value of cross-cultural rhythmic studies. I expect to provide clear examples of how tabla and drum percussive techniques merge with my studied artistic references. I will also elaborate on this in the upcoming chapters.

The distinct compositions and performances of my artistic references, along with their collaborations with global artists, illustrate the cultural, musical, and technical adjustments required to incorporate Indian rhythmic patterns into a jazz setting.

In conclusion, this thesis aims to demonstrate that adapting tabla traditions to drumming is not simply an act of fusion but an intricate process of negotiation, reinterpretation, and innovation. The rhythmic intersections explored here serve as a microcosm of global musical exchange, illustrating how tradition and modernity, structure and flexibility, preservation and transformation can meaningfully coexist. By recognizing the complexities of this interaction, we move beyond simplistic notions of authenticity and embrace innovation.

Definition of Hybridization: Conceptual Foundations, Negotiation, Musical Identity and Ethical Engagement in Intercultural Performance

Having said this, I need to give a brief overview—however short it may be—of hybridization by explaining and identifying the root of this word.

Before exploring the specific mechanisms of rhythmic hybridization between Indian and Western percussion traditions, it is essential to clarify the broader theoretical framework that underpins the concept of hybridity. The term *hybrid*, derived from the Latin *hybridus*, meaning the offspring of parents of different species, an etymology that itself signals the crossing of boundaries and the creation of something new from distinct origins. In cultural theory and music studies, hybridity refers to the

¹ In Hindustani music, *Tala* (Sanskrit) and *Taal* (Hindi/Urdu) refer to the same concept of rhythmic cycle or meter; *Tala* is the more formal or classical term, while *Taal* is the vernacular pronunciation commonly used in performance contexts.

processes of fusion and transformation that occur when disparate elements meet, merge, and generate new forms.

Far from being a recent or marginal phenomenon, hybridity has long been a central aspect of cultural development. As scholars such as Peter Burke (2009) observe, "*cultural hybridity is the norm rather than the exception*" in historical processes of change and adaptation. Hybridity is not simply a fusion of forms; it is a dynamic, often asymmetrical negotiation that can reinforce, subvert, or reconfigure existing traditions. As such, hybridity plays a crucial role in what is now recognized as tradition: not as a static legacy, but as a living and evolving construct, shaped by continuous exchanges and reinterpretations (Hobsbawm & Ranger, 1983).

In this view, hybridity is not opposed to tradition; it is a mechanism through which tradition is revitalized, questioned, and extended. Hybridity implies a tension between continuity and innovation, between preservation and transformation. In the context of music, especially within globalized contexts, hybridity allows artists to draw on inherited vocabularies while simultaneously reinventing them through intercultural dialogue.

Furthermore, the implications of hybridity transcend disciplinary boundaries. In fields such as biology², anthropology³, linguistics, and cultural studies⁴, hybridity is understood as a mode of recombination, which alters, slows down, accelerates, or redirects developmental trajectories. As Marwan Kraidy (2005) argues, hybrid forms often arise from unequal encounters, but they also produce spaces for negotiation, action, and resistance.

² Mendel, G. (1822-1884) "Plant Hybridization Experiments". 1865 Brno. The crosses between animal or plant individuals come from a cross of parents belonging to different races or varieties, obtaining the hybridization of DNA. This method has allowed countless advantages in medicine, health, the treatment of food, and much more.

³, E.g., the history of humanity with all its facets, including migrations, conquests, and colonialism, which has influenced, modified, and integrated, at times, different traditions and languages in such distant places and with solid traditions.

⁴ Fukuyama, F. (1992). *The end of history and the last man*. Published by Penguin. (1992: xii) and Masuoka, J. (1945). *The hybrid and the social process*. Phylon. vol. 6 no. 4 (4th quarter, 1945), pp. 327-336. Published by: Clark Atlanta University.

In the current era of interconnectedness, cultural boundaries are increasingly porous. Hybridization processes have become inevitable and generative, dissolving rigid classifications and promoting pluralistic forms of expression. In music, this is particularly evident in the intersections of rhythm and form, where the encounter of different percussive languages does not dilute, but enriches each tradition involved.

In this context, it is helpful to view hybridity and embeddedness as interconnected phases or dimensions within the life cycle of cultural forms.

In discussing a comprehensive understanding of the hybrid concept, it is pertinent to reference Clifford's quotation (1988: 15) to thoroughly explore the subject matter while also considering the diverse perspectives associated with it and recognizing its significance:

The notion of hybrid still opens up vast possibilities for analysis and interpretation, highlighting the importance of dialogue and continuous confrontation in their indefinite and impure character in the intermediate space resulting from the impossibility of defining according to criteria natural, stable, and irrefutable one's own identity and that of others, one's own and other people's differences.

This statement's citation is significant for my thesis because it supports my view of rhythmic fusion not as a static, completed product, often considered the establishment of a new "style" but as an ongoing process of transformation. It involves engaging in a space of confrontation and negotiation, where both musical languages face their boundaries.

Cultural expressions often arise from blending processes, such as trade, migration, conquest, or artistic exchange. Over time, these forms can become more established, recognized as canonical, and regarded by communities as deeply ingrained and even *authentic*. Therefore, although a tradition's roots may be hybrid, its actual experience is characterized by stability, continuity, and local significance. Consequently, Clifford's idea of the "in-between" aligns seamlessly with this conceptual space.

Hybridity has become a significant phenomenon in music and musicology, particularly in the context of globalization, which fosters cultural exchanges and blends musical traditions.

In music, hybridity refers to the blending of diverse musical traditions, genres, or styles of instruments. However, in musicology, the hybrid concept extends beyond mere combination; it raises deeper issues

regarding identity, authenticity, power, and innovation. Hybridity in music is often associated with the movement and exchange of people, ideas, and cultures, such as through colonialism and migration, which have given birth to various hybrids through interaction. One way could be by extracting the good aspects they considered appropriate to use from one another, from music, e.g., the mere musical creation, the harmonies, melodies, progressions, and the "craftsmanship" point of view that concerns the musical instrument.

In ethnomusicology, the concept of hybridity plays a crucial role in understanding modern musical practices that do not conform to strict categories like "traditional," "modern," "Western," or "non-Western." This framework enables scholars to investigate how musical elements are translated, recontextualized, or challenged when diverse traditions intersect. Importantly, hybridity in music encompasses not just stylistic blending but also reflects the social, political, and aesthetic ramifications of these interactions, prompting inquiries into authenticity, agency, and innovation.

As I mentioned earlier, although I will explore this later, hybridity, rooted in postcolonial theory, pertains to the emergence of new cultural forms that arise from the convergence of different traditions, identities, or knowledge systems. Homi K. Bhabha⁵ (1994: 4, 36-39) defines hybridity as a *Third space*, a realm of negotiation where meaning is fluid and continuously redefined through cultural encounters, and describes hybridity as an interstitial passage *between* fixed identifications that allows cultural hybridity to entertain differences without an assumed or imposed hierarchy.

In ethnomusicology, this concept has facilitated the examination of how global musical exchanges transform sounds and their cultural significance, opening up the possibility of moving beyond static and essentialist interpretations of music as tied to fixed cultural identities. So, *Third Space* serves as a lens for analyzing musical change: for instance, adopting Indian rhythmic structures in jazz creates a new expressive grammar that reconfigures rhythmic perception, improvisation logic, and performance conventions.

⁵ Homi Bhabha, an eminent postcolonial theorist, offers insightful perspectives on crossover and its implications for Indian music in the context of cultural hybridity and globalization.

Bhabha's framework helps ethnomusicologists examine power dynamics in musical exchanges and how musical practices evolve through contact and reinterpretation. Rather than idealizing hybridity as harmonious, it encourages critical inquiry into the mediation of musical forms, control of representation, and context-dependent meanings. This legitimizes intercultural music study as a form of cultural discourse, addressing broader issues of identity, belonging, and global inequality.

Nevertheless, one of the central debates surrounding musical hybridity is the question of *authenticity*. Critics often raise concerns that hybrid music, especially when it involves appropriating non-Western musical elements, compromises the authenticity of the fused traditions. This debate is particularly relevant in the context of globalization. However, from a postcolonial perspective, hybridity challenges the notion of purity or authenticity in culture, instead emphasizing that all cultures are, to some extent, hybridized through contact with others.

Again, Bhabha's work (1994) helps emphasize the dynamic and fluid nature of cultural identities, challenging fixed notions of purity and authenticity. Bhabha argues that Indian music, with its rich history of cultural exchange and synthesis, embodies the concept of crossover in a profound manner. Throughout its long and diverse history, Indian music has continually absorbed and assimilated influences from various traditions, including Persian, Arabic, Central Asian, and Western musical styles. This process of cultural hybridization has led to the emergence of diverse musical forms and genres, from Hindustani and Carnatic classical music to contemporary fusion and experimental genres.

Furthermore, the crossover concept in Indian music challenges traditional notions of authenticity and cultural purity. Rather than viewing musical traditions as static and fixed, he emphasizes the importance of embracing hybridity and fluidity as inherent aspects of cultural identity. (Bhabha 1994: 85-92)

At the same time, Bhabha warns against the dangers of cultural appropriation and commodification in the context of crossover. He emphasizes the need for respectful dialogue between cultures, underlining the importance of recognizing and valuing the contributions of different musical traditions while acknowledging the complexities and challenges of cultural exchange in a globalized world.

Researchers such as Steven Feld (2000) and Veit Erlmann (1996) have demonstrated that musical hybridity is seldom neutral; it typically reflects

existing social, political, and economic disparities. Nonetheless, it can also provide a venue for creativity, resistance, and intercultural discourse. Therefore, hybridity is a descriptor of artistic innovation and a critical framework for analyzing power dynamics during intercultural exchanges.

Steven Feld's work explores the dialogical aspect of musical interactions, highlighting the need for mutual understanding and ethical considerations in cross-cultural collaborations. He critiques Western musicians for appropriating non-Western elements while failing to recognize their original complexities and traditions. His idea of *Schizophonic mimesis* (1994:41-42, 257-261) illustrates the detachment of sounds from their cultural roots, leading to their recontextualization in new settings, which often diminishes their original meaning and significance.

Frith (1996: 121), a prominent scholar in popular music, examines the intricate aspects of cultural identity, authenticity, and musical meaning. He critiques essentialist perspectives on musical culture, highlighting instead the evolving and collaborative nature of musical meaning and identity. He contends that *hybridization is a process rather than a state*, emphasizing a key conceptual shift: hybridization is not merely a fixed result or a design category but an active process involving continuous interactions and negotiations of difference, value, and belonging.

Consequently, musical aspects are deeply intertwined with anthropological and socio-cultural factors, as they are inherently linked. This connection is why various genres converge and blend, resulting in a mutually beneficial outcome for the emerging genre. We observe that one culture can benefit another, rather than experiencing hardship, ultimately leading to new results that represent initial steps toward exploring further opportunities.

From a musicological perspective, hybridity prompts scholars to reevaluate their approaches to analyzing and categorizing music. Traditional musicological approaches often focus on preserving and studying distinct musical traditions, but hybridity challenges the notion that musical traditions exist in isolation. Instead, musicologists studying hybrid forms must take an interdisciplinary approach, considering the fused musical elements and the historical, cultural, and political contexts that shape hybrid music. In music studies, hybridity challenges traditional boundaries and ideas of authenticity. Hybridization is not neutral; it always involves negotiating values, aesthetics, and identity. In this project, hybridization is not about eclecticism or multicultural façade

but about engaging with the friction and creativity that emerge from encountering different rhythmic traditions.

Timothy D. Taylor (1997: 15–18 and 28–31) provides a critical examination of how Western and non-Western music interact in the global music marketplace, arguing that hybridity, as it often appears in world music and intercultural collaborations, risks becoming a superficial amalgamation driven by market forces rather than genuine cultural exchange. He criticizes how Western artists, even those with sincere intentions, can inadvertently perpetuate power imbalances by framing non-Western traditions in a Western-centered aesthetic framework. For example, Taylor notes how non-Western music is often exoticized or reduced to a “spice” that enhances a predominantly Western composition without fully engaging with the cultural and philosophical underpinnings of the original tradition. Together with Veit Erlmann (1996), Timothy Taylor (1997), they discuss the cultural politics of hybrid music, questioning whether such fusions involve respectful exchange or appropriation. Taylor reminds us that musical borrowing occurs within complex power hierarchies, raising essential questions of authorship and ownership.

Musical hybridization is not a new phenomenon. One of the most prominent musical examples is jazz, a hybrid form combining African rhythmic sensibilities with European harmonic structures. Gunther Schuller (1968) and Ted Gioia (2011) have shown that jazz is a genre born of cultural fusion, continually evolving through cross-pollination.

Originating from the African diaspora in the Americas, jazz blends African rhythms, European harmonic frameworks, and elements of American culture. This genre is inherently hybrid and continually evolves, welcoming influences from diverse global traditions. Thus, jazz is a hybrid art form that reflects its roots in black musical traditions while being expressed through the refined language of European music. For instance, the polyrhythms and polyphonies characteristic of African heritage seamlessly intertwine in its compositions.

African rhythms, brought by enslaved people, emphasized syncopation, swing, and complex rhythmic layering, while European classical music contributed harmonic progressions, melodic structures, and musical forms. This cultural meeting ground gave rise to jazz, a genre of music that is both spontaneous and structured, in which improvisation plays a key role, and the fusion of different scales, such as the blues scale, with European tonal harmony.

The fusion of these influences also reflects the broader sociocultural realities of the time: jazz emerged in the late 19th and early 20th centuries, when African Americans faced challenges to their cultural identity in a racially segregated society. Thus, jazz became a musical hybrid and a symbol of resistance, resilience, and creativity, embodying the spirit of cultural dialogue between African heritage and European musical traditions.

In this regard, Schuller's work (1968:3-27) remains a seminal text, examining how African rhythms, syncopation, and improvisation fused with European harmonic and formal structures to create the fundamental language of jazz. Schuller meticulously describes these processes, particularly the polyrhythmic innovations derived from African traditions and their adaptation into the ragtime and blues forms that preceded jazz. Similarly, Ted Gioia's book (2011:22-65) offers a comprehensive chronology. It illustrates how jazz evolved through its regional manifestations, from New Orleans to Chicago, Kansas City, and New York, and how these locales⁶ influenced its stylistic diversity.

African American society is a prime example of social and intercultural hybridization. It has its roots in a "forced" interaction shaped by historical events, particularly the Atlantic Slave Trade, which has persistently sought a stable equilibrium. Rich in traditions and cultures, African society has sought redemption through both instrumental and vocal art and music. (Gilroy, 1993:16)⁷

Gilroy offers a crucial theoretical perspective on jazz, describing it as a hybrid cultural expression from the African diaspora. His analysis of the *Black Atlantic* frames jazz as a means of resistance against oppression and as a means for African Americans to express their culture in a racially divided society. Gilroy's findings resonate with ethnomusicologist Ingrid Monson's (2007:54-76) investigation into the relationship between jazz and the civil rights movement, illustrating how jazz served as a symbolic and functional instrument for social and political change.

Building on the topic of musical hybridization, I will examine different musical situations through important socio-cultural examples. For example, the fusion of classical European and pop music has highlighted

⁶ Gioia's work highlights key figures, such as Louis Armstrong and Duke Ellington, whose innovations cemented the genre's artistic and cultural significance.

⁷ Gilroy, P. (1993) *The Black Atlantic: Modernity and Double Consciousness*. It recognized the importance of European and African global travel as the foundation for Double Consciousness.

the potential for modernizing classical compositions (Rutter, 2016: 219), and classical music gained widespread popularity as a result. Later, the rock band Deep Purple exemplified this blend by releasing *Concerto for Group and Orchestra* (1969) and *Gemini Suite Live* (1970), which integrated hard rock with classical music. Furthermore, the collaboration between Freddie Mercury and soprano Montserrat Caballé contributed to Barcelona's global success.

Following the wave of hybridity in the music scene, composers such as Frank Zappa, John Cage, and Karlheinz Stockhausen have explored hybrid forms by incorporating world music and non-Western instruments.

I want to highlight Frank Zappa, an extraordinary composer and musician, and his connection to hybridity. His remarkable talent for merging various musical styles and traditions exemplifies this concept, resulting in works that defy conventional genre classifications. His pieces incorporate elements of rock, jazz, classical music, avant-garde, and world traditions, illustrating the postmodern notion of blurred boundaries between high and low art, East and West, and various genres.

In this context, Zappa's hybridity is not focused on the cultural fusion I am addressing, such as the combination of Indian and Western music. Instead, it is worth mentioning him here for his overall approach to integrating diverse elements. His hybridization process reflects the musical trends of the 20th century. Introducing Zappa inevitably sparks discussions about hybridization in world music, a subject that has been a key focus of academic study, especially since the 1990s.

In this regard, Tim Taylor and Steven Feld, influential scholars of cultural hybridity and the global music movement, offer distinct perspectives on intercultural interactions and the commercialization of music. Taylor (1997) analyzes how hybridity emerges and is negotiated in musical practices by examining figures like Frank Zappa, whose work often incorporated non-Western musical elements, including Indian rhythmic traditions, into Western experimental and rock idioms. Similarly, Feld (2000) explores the dynamics of musical exchange and the ethical complexities surrounding globalized soundscapes, emphasizing how such fusions can both challenge and reinforce cultural boundaries.

While Frank Zappa's eclecticism reflects a specific form of genre hybridization within Western art and popular forms, artists like Paul Simon and Peter Gabriel represent the fusion of world music in a cross-cultural context more effectively. For instance, Simon's "Graceland" (1986), which

features South African musicians during the apartheid era, and Gabriel's establishment of the Real World label in the late 1980s, both signify pivotal moments in the globalization of non-Western music within Western platforms. These artists have actively curated and collaborated across various traditions, raising critical inquiries regarding musical hybridization, authorship, and the dynamics of power in cross-cultural exchange.

Moreover, composers such as John Cage and Karlheinz Stockhausen played a foundational role in expanding the boundaries of Western art music by engaging with non-Western instruments, philosophies, and compositional strategies, forging early examples of hybrid musical forms. Although they approach hybridity from different perspectives, their contributions offer relevant and critical insights that challenge traditional boundaries and unify diverse musical traditions and philosophies. Cage, deeply influenced by Asian aesthetics and Zen Buddhism, famously integrated instruments like the *gamelan*⁸ and explored chance operations to disrupt Western formalism, inviting new conceptions of rhythm and time.

Silence is a core compositional principle that departs from traditional Western structures. As Cage (1961:149) stated:

I am not so much interested in sound as I am in silence, the way sounds emerge from it and then return to it.

His exposure to gamelan music and Indian rhythmic thought informed works such as *Sonatas and Interludes* (1946- 48)⁹, where he incorporated prepared piano techniques to mimic the timbral variety of percussion ensembles from Java and Bali (Pritchett, 1993: 42–45).

Similarly, Karlheinz Stockhausen envisioned a global, spiritual music that could transcend cultural boundaries. In works like *Telemusik* (1966), he layered tape recordings of traditional music from Japan, Vietnam, and Africa with electronic textures, aiming for a “universal music” that would represent “the whole world as a single sound” (Stockhausen, 1989: 89). In *Stimmung* (1968), Stockhausen incorporated overtone singing and linguistic elements from multiple languages, demonstrating his interest in vocal techniques drawn from global traditions (Kurtz, 2008: 147–152).

⁸ The gamelan is an orchestra of mostly idiophone musical instruments of Indonesian origin that includes metallophones, xylophones, drums, and gongs, but can also include bamboo flutes, string instruments, and the voice.

⁹ https://www.youtube.com/watch?v=X990zJyVguc&ab_channel=OrlandoBBass

These composers did not merely incorporate non-Western instruments as exotic colors; they also challenged Western music's hierarchical frameworks by integrating diverse cultural approaches to rhythm, sound, and form. Their explorations laid crucial groundwork for later cross-cultural and hybrid musical practices, including the fusion of Indian classical traditions with Western avant-garde and jazz idioms.

Continuing with other significant examples, the musical *West Side Story* (Broadway, 1957), in which the extraordinary conductor and composer Leonard Bernstein, through the involvement of different musical genres, reflected the multiethnic American society of the time. He became a concrete trailblazer in the musical hybrid, showing the infinite possibilities of understanding, perceiving, and researching music. (Morelenbaum, 2018, February 9th)¹⁰.

Hybridization is not only a musical or cultural process, but also occurs at the instrumental level. Since this theme will be explored in depth in subsequent chapters, I will briefly introduce the two reference instruments central to my research: the tabla and the drum.

The tabla, one of the most important drums of northern India, exemplifies historical hybridization in form and function. It is commonly believed to have originated with the split of the *pakhāwaj*¹¹, a traditional barrel drum associated with older musical forms such as the *dhrupad*¹². This transformation was not only structural, but also musical: the shift to a two-drum configuration was made to accommodate the more delicate and expressive demands of *khayal*¹³ singing. This genre emerged in the *Mughal*

¹⁰ Gianni Morelenbaum Gualberto (Recife, 1955), a musicologist, journalist, and artistic director who writes about jazz in the most authoritative magazines. He taught the subject of the History of Music at Bocconi University in Milan, Italy. His quotes on this link: <https://www.musicajazz.it/leonard-bernstein-west-side-story/>.

¹¹ The pakhawaj is a barrel-shaped two-headed drum originating from the Indian subcontinent, a variant and descendant of the older mridangam.

¹² Dhrupad is an ancient style of Indian classical music in the Hindustani tradition. Notable for its slow tempo, sustained notes, and intricate melodies, it is often performed in sacred or brief settings and is one of the oldest genres of Indian classical music.

¹³ Khyal is a major form of Hindustani classical music in the Indian subcontinent and it is associated with romantic poetry and allows the performer greater freedom of expression. In khyal, ragas are extensively ornamented, and the style calls for more technical virtuosity.

era¹⁴. The redesign enabled lighter tones, greater rhythmic agility, and more nuanced articulation, traits now integral to the tabla's identity.

The tabla's hybrid character also stems from its construction, which fuses elements of several traditional percussion styles. It integrates aspects of Persian and Central Asian timpani, such as the *naqqāra*, along with indigenous Indian percussion techniques. Thus, its lineage reflects a synthesis of cultural and acoustic influences. The resulting sound system, a pairing of a wooden *dayan* (right-hand drum) and a metal or clay *bayan* (left-hand drum), offers a vast tonal palette and an intricate vocabulary of strokes, capable of both melodic resonance and complex rhythmic expression.

Likewise, the drum set is a product of hybridization, albeit from a Western perspective. It originated in the early 20th century in the United States as a set of orchestral percussion instruments—snare drum, bass drum, toms, cymbals—consolidated into a single configuration playable by a single musician. Drums have evolved in tandem with the development of jazz and popular music, becoming an essential tool for rhythmic innovation and stylistic adaptability.

Therefore, both instruments are hybrids by nature, the result of historical transformation and cultural contamination processes. The tabla reflects a fusion of Indo-Persian traditions adapted to classical Indian forms, while the drums embody Western innovations in efficiency, versatility, and groove. In this perspective, their pairing in my research is not arbitrary, but rooted in a more profound structural analogy: both are the product of a fusion and offer a platform for further creative synthesis.

Hence, hybridity in music and instruments is essential to understanding contemporary global musical practices. It allows us to explore how musicians creatively blend diverse influences, resulting in new forms of musical expression. Whether through the incorporation of Indian rhythmic structures into jazz, the use of non-Western instruments in Western contexts, or the fusion of genres, hybridity offers endless possibilities for musical innovation. For my thesis, this concept is crucial as it provides a theoretical basis for exploring how tabla compositions, i.e., *Kaida*, *Rela*, and *Laggi*, can be adapted for drumming in a jazz context.

¹⁴ The Mughal era denotes the period when the Mughal Empire, a Turkic-Mongol Muslim dynasty, governed much of northern India, parts of Afghanistan, Balochistan, and a large portion of the Indian subcontinent from around 1526 to 1857. This era is renowned for its cultural achievements, centralized governance, and significant impact on art, architecture, and literature.

From this foundation, it becomes clear that intercultural rhythmic pedagogy is not simply additive but transformative. Scholars such as Nelson, Bakan, and Clayton have demonstrated how learning systems, including tal-based frameworks and oral transmission techniques, challenge Western assumptions about time, embodiment, and memory in music education. These traditions emphasize internalization through vocalization, imitation, and cyclical perception, offering musicians tools far beyond notation or metrical subdivision.

By engaging deeply in such practices, students reconfigure their sense of rhythmic space, developing an intuitive awareness of microtiming, phrasing, and improvisational structure. Tenzer (2006) and Weiss (2011) further demonstrate that when these systems are applied in compositional contexts, they generate new rhythmic grammars: ways of thinking and creating that emerge from dialogue rather than dominance. The ultimate goal is to cultivate a rhythmic fluidity that is both culturally informed and creatively adaptable, allowing musicians to engage with multiple traditions without compromising their distinctive logic.

Thus, understanding the rhythmic hybridity between Indian and Western percussion traditions entails engaging with a broader historical and theoretical discourse that views hybridity as a fundamental principle of cultural production, rather than a deviation from it. This understanding provides a crucial lens to examine how new rhythmic vocabularies emerge, not in isolation, but through the friction and fusion of differences.

Following the discussion of the tabla and drums as hybrid instruments, it's crucial to differentiate them from a related concept: hybrid instrumentation or hybrid ensembles.

Hybrid ensembles represent modern creative groups that intentionally merge instruments from various musical traditions in a unified setting. The emphasis lies not on the historical context of the instruments but rather on their placement and function within a broader ensemble that defies traditional limits.

For instance, incorporating tabla and drums within one performance setup doesn't entail reconstructing the history of each instrument. Instead, it involves examining how they can engage in a contemporary musical dialogue, highlighting their differing timbral, technical, and cultural traits. This kind of instrumentation opens up a new expressive landscape where the fusion is not only sonic but also conceptual, requiring the negotiation of distinct rhythmic frameworks, performance methods, and aesthetic

priorities. It signifies a deliberate and creative decision to integrate instruments—and thus musical systems—from diverse cultures.

Musicians such as Dan Weiss, whom I will discuss in more detail in another section, have explored this form of hybridization by incorporating the intricate rhythmic language of the tabla into the context of jazz, using its techniques to expand the rhythmic palette of the drum set. Weiss integrates tabla's vocabulary into jazz drumming with meticulous attention to phrasing, sonority, and structural logic. Weiss's work highlights how instrumental hybridization can open up new avenues of rhythmic expression in jazz, allowing complex rhythmic patterns such as *Tihais* or *Kaidas* to be adapted to jazz rhythmic measures and improvisational structures.

Similarly, in jazz fusion and world music, Western musicians have incorporated non-Western instruments, such as the sitar, oud, and djembe, into their ensembles, expanding the music's timbral and rhythmic possibilities. Integrating foreign instruments often requires rethinking traditional performance techniques and musical structures. The hybridization of instruments thus parallels the fusion of musical traditions, with both processes creating new sonic identities.

This project, however, raises larger questions that extend beyond rhythm and instrumentation. When musical traditions come together, the resulting soundscape can evoke curiosity, discomfort, or a reevaluation of cultural boundaries. Audience members interpret hybrid performances through cultural lenses, shaping their perspectives on authenticity and emotional depth. Therefore, hybridity emerges as a space for negotiation, where meanings are reshaped by context and expectations.

The social dynamics of intercultural performance hold equal significance. These performances are situated within global exchange networks, influenced by colonial histories and current political landscapes. The stage serves as a venue for the display and negotiation of cultural identities, positioning the ethics of collaboration as a key issue.

This prompts us to explore how we can ethically navigate the borrowing and blending of traditions. Combining elements from diverse cultures is not enough; the process requires respect, understanding, and self-awareness. It is crucial to address authorship and agency, particularly in contexts where power dynamics are uneven.

Thus, acknowledging the mixed origins of cultural expressions does not necessarily diminish their perceived or actual roots. In fact, hybridity can be viewed as a driving force in cultural evolution, while rootedness represents a temporary consolidation, a snapshot of culture that gains social significance and continuity. Therefore, both concepts are essential for understanding the complex relationship between tradition and transformation.

After this vast overview of the hybrid, I conclude by mentioning the distinct opinion, which I significantly share, of musicologist Van der Meer (2005: 70), who says that in music, the hybridizations, borrowings, and incursions of one into another may even be more substantial than with language. Instead of being *neither one thing nor the other*, hybrid musicology aims to be both this and that.

Chapter One

Musical Dialogues: Exploring hybridity between East and West

In this chapter, I introduce the topic and emphasize how music becomes both a reflection and a catalyst for cultural exchange. It creates a space where tradition and innovation coexist, and the boundaries between East and West dissolve into a shared language of creativity.

The musical interaction between East and West represents one of the most fascinating chapters in the history of cultural exchange. For centuries, music has served as a medium of dialogue, allowing different traditions, philosophies, and practices to converge. In this context, the relationship between Indian music, primarily the Hindustani and Carnatic traditions, and Western musical structures has been prosperous and transformative. This significant chapter examines the multifaceted interactions that arose when these two distinct worlds converged, yielding profound innovations in both art and culture.

The concept of the “meeting” between West and East traditionally examines how Western composers, musicians, and educators have engaged with Indian music, seeking inspiration from its rhythmic complexity, melodic sophistication, and spiritual underpinnings. Figures like Ravi Shankar and Yehudi Menuhin, along with iconic moments such as the Beatles’ embrace of Indian music, illustrate how Indian traditions have shaped popular and classical Western music. At the same time, it reveals the reverse dynamic: how Indian musicians, educators, and cultural institutions have adapted, interpreted, and hybridized Western influences within their musical traditions. From the pedagogical role of Indian gurus in global music education to Bollywood’s seamless incorporation of Western orchestration, this dialogue underscores the two-way flow of ideas. It is equally fascinating to see how Indian musicians have preserved their musical identity while embracing new influences. Their work offers a profound commentary on the transformative power of intercultural dialogue. Far from being passive recipients of cultural influences, these artists have demonstrated remarkable ingenuity in integrating Western harmonies, instrumentation, and styles into Indian music. This process often reflects a blend of respect for tradition and boldness in innovation, reshaping the musical landscape.

The convergence of these perspectives is not simply an exploration of musical styles but a reflection on broader questions of identity,

authenticity, and innovation. Scholars like James Kippen and Tony Whyton have critically analyzed these exchanges, revealing how hybridity challenges traditional notions of cultural purity and authenticity. For example, Whyton's insights into authenticity in hybrid music provide an essential framework for understanding cultural negotiations.

Similarly, the historical development of *Hindustani airs* during the colonial period and the role of the UK *diaspora* in the evolution of *Bollywood* further demonstrate how East and West have continually redefined one another.

1.1 The UK Diaspora and Indian Music

Considering that Indian music is already a hybrid form, it is worth briefly discussing its various historical facets, namely, the origins of Hindustani music and Indian music in the UK *diaspora*.

Hindustani classical music, which developed primarily in northern India, has long been regarded as a hybrid musical form due to its historical influences from Central Asian, Persian, and indigenous Indian traditions. These cultural elements were synthesized most intensely during the Mughal¹⁵ period when Persian cultural and artistic influences permeated the Indian subcontinent. This fusion of musical systems is at the core of Hindustani music. It has shaped its unique character, distinct from the Carnatic tradition of southern India, which remained relatively more isolated from outside influences.

Ethnomusicologist Bonnie C. Wade (2001: 117-119), considering the substantial cultural and musical exchanges between India and Persia during the Mughal reign, argues that:

The fusion of Persian modal structures with Indian ragas allowed Hindustani music to evolve into a hybrid musical form that carried forward the traditions of both cultures while developing its own identity.

This fusion was not merely theoretical but embodied in practice through the shared use of specific instruments and the creation of new forms. For example, instruments such as the sitar, sarod, and tabla witness this cross-cultural fusion. The tabla, for instance, is thought to have evolved from the Persian naqara drum and the Indian pakhawaj, symbolizing the

¹⁵ The Mughal Empire, also known as the Mughal Kingdom, was the most crucial Indian empire of the Muslim religion (it has Mongol and Turkic origins). It ruled over almost the entire territory of South Asia during Islamic domination in India.

meeting of two rhythmic traditions. Similarly, the *sitar* fuses features of the Persian *setar* and the Indian *veena*. These instruments represent the hybrid identity of Hindustani music and its ability to synthesize divergent cultural influences into a cohesive system.

Again, ethnomusicologist Joep Bor (1992: 24) points out that the rhythmic complexity of Hindustani music owes much to this hybridization, as Persian rhythmic patterns were adapted to the Indian *tala* system, creating forms such as *Teental* (16 beats) and *Ektal* (12 beats).

These cross-cultural exchanges demonstrate that Hindustani music is intrinsically a product of cultural hybridization. Its ability to incorporate elements from Central Asia and Persia while retaining its Indian roots proves the dynamic nature of musical development in the subcontinent and its crucial role in understanding the evolution of Indian classical music within the British diaspora. When Indian communities migrated to the UK, particularly during the post-colonial period, they brought their cultural traditions and a form of music marked by intercultural exchange.

The Indian diaspora in the UK has played a pivotal role in fostering a continuous musical exchange between Indian and Western traditions. Since the mid-20th century, Indian immigrants have brought their musical heritage to British cultural spaces, reshaping local music scenes and deepening the West's understanding of Indian music.

Indian music in the UK diaspora is a complex and multifaceted phenomenon that reflects the intricate interplay between cultural identity, adaptation, and creativity within a transnational context. As a significant component of the wider British Asian music scene, it encompasses various genres and styles, including Hindustani and Carnatic classical music and contemporary forms such as Bhangra¹⁶, Asian Underground¹⁷, and fusion music.

¹⁶ Bhangra is non-traditional Punjabi music originating in Britain, i.e., Southall and Birmingham. It is an upbeat, popular music associated with the Punjabi diaspora in Britain. This Punjabi music was unique because it was neither traditional nor sought authenticity. While the traditional folk music of Punjab has a set of melodies that various singers use, Bhangra was a form of strict "band culture" in that new melodies were composed for each song. Therefore, the musicians were as influential as the singers.

¹⁷ Asian Underground, a genre that emerged in the 1990s, is another example of how Indian music has adapted and thrived in the UK diaspora. Artists like Talvin Singh and Nitin Sawhney have played an integral role in fusing Indian classical music with electronic, jazz, and other contemporary genres, creating a distinctive sound that resonates with diverse audiences.

In the diasporic context, music plays a significant role. According to Dietrich (2002: 36), there are two ways in which music has transformed diasporic space:

First, music unifies diaspora groups in musical contexts where the homeland is semiotically evoked through musical sound. In its mediated forms, music also provides a diasporic means of communication between separate diaspora communities (...) Second, music empowers diaspora groups by defining a unique cultural space in the host nation, providing a voice to the marginalized community.

In this regard, Lidskog (2016: 24) stated that:

Music, among other functions, helps people understand themselves, form and maintain social groups, engage in emotional communication, and mobilize for political purposes.

One critical aspect of Indian music in the UK is its ability to adapt and evolve in response to the diverse cultural and social environment of the diaspora. Musicians of Indian descent often navigate multiple cultural identities, fusing traditional Indian musical elements with Western influences and other global sounds to create new and innovative musical expressions.

Ethnomusicologist Tina K. Ramnarine (2007: 112) emphasizes the significance of such figures in promoting intercultural dialogue. She notes how diaspora musicians play a dual role as cultural ambassadors and innovators, as well as the role of diasporic communities in maintaining and transforming musical traditions. She describes them (2003: 45) as *guardians of legacy* while simultaneously innovating in their new cultural contexts.

Although the British colonial era is often highlighted when discussing Western musical influence in India, the earlier and ongoing impact of the Portuguese, particularly in Goa, must not be ignored. Beginning in the sixteenth century, Portuguese missionaries, particularly the Jesuits, introduced European liturgical music, including Gregorian chant, polyphony, and the use of Western instruments such as the organ, violin, and harpsichord. Goa, a Portuguese stronghold, soon became a center for the institutionalized teaching of Western music.

The Portuguese established lasting cultural and educational institutions, such as seminaries and schools that systematically taught Western liturgical music, harmony, and counterpoint. These institutions produced

generations of Goan musicians who excelled in European art music, taking on roles as performers, educators, and members of military bands throughout British India. As noted by Fernandes (2020: 123–138):

Goan musicians played a key role in the proliferation of Western music across the subcontinent, forming a transregional network of cultural transmission.

Their ability to move freely and speak multiple languages enabled them to serve as intermediaries between colonial and local musical traditions, shaping sacred music, military bands, film scores, and urban soundscapes from Mumbai to Calcutta.

These findings indicate that the exchange of musical ideas in India started not with the British but rather earlier with the Portuguese, emphasizing the extensive duration of musical hybridity within the subcontinent. Acknowledging this initial Western influence enhances our comprehension of India's colonial soundscape and supports the notion that musical traditions have typically developed through a tapestry of layered and interconnected cultural exchanges.

Hence, Indian music has been influenced by many factors, including regional cultural traditions, historical events, religious practices, and interactions with foreign styles, musical genres, and musicians. Not to mention, the globalization of the music industry¹⁸ has brought new opportunities and challenges for Indian musicians. Access to global markets and exposure to international musical styles have led to Indian music merging with genres such as hip-hop, jazz, rock, and electronic music.

Thus, the British diaspora has been a space where cultural traditions clash and evolve, notably in the interaction between Indian music and Western traditions. Scholars like Peter Manuel (1993:78-89) examine how Bollywood music, rooted in classical traditions yet heavily influenced by Western styles, has become an international phenomenon. This blend of Hindustani melodies with jazz, funk, and electronic music reveals a hybrid aesthetic and cultural diplomacy, shaping perceptions of Indian music abroad. To illustrate this point more clearly, I will examine how the film genre's accessibility and adaptability facilitate cross-cultural experimentation.

¹⁸ New technological advances, such as digital recording and online streaming have revolutionized the industry and enabled greater access to diverse musical forms.

The 1960s marked a watershed moment in the influence of Indian music on Western rock and pop. Artists like the Beatles and the Rolling Stones, two examples I will discuss later, innovated their sound by incorporating elements of Hindustani music.

All these processes have also resonated strongly with the phenomenon of *Bollywood* music. As a film industry, Bollywood has always been a space where different musical traditions meet and merge. Historically, *Bollywood* music has incorporated Indian classical elements, including ragas and Hindustani rhythms, as well as Western influences such as jazz, rock, and later, electronic music. This reflects Indian music's ability to absorb, adapt, and influence Western musical forms.

Bollywood music has historically served as a significant cultural touchstone for Indian diaspora communities, facilitating a connection to their homeland and heritage while concurrently evolving to reflect the unique experiences of these communities. The global reach of Bollywood, boosted by technology and satellite TV in the 1980s and 1990s, has solidified its status as a transnational cultural phenomenon. Incorporating Western instrumentation since the 1950s through composers like Naushad¹⁹ and R.D. Burman²⁰, Bollywood's music resonates deeply with diaspora communities, forging a shared cultural lexicon for generations. (Devasundaram, 2016: 87)

The widespread popularity of Bollywood music globally, especially within diasporic communities such as the UK, demonstrates once again how Indian music can evolve through interactions with external musical traditions, transforming into a new hybrid genre. (Booth & Shope, 2014)

Cultural theorist Edward Said (1993: 12-14) emphasizes that cultural exchanges should not be viewed solely through the lens of domination and subjugation, as these narratives can oversimplify the complex nature of cultural interactions.

¹⁹ Naushad Ali (1919–2006) was a pioneering Indian film composer who elevated Bollywood music to new artistic heights by integrating classical Indian music traditions into popular cinema. His scores often featured orchestral arrangements with Hindustani classical elements, such as ragas and tabla rhythms, skillfully interwoven with folk influences.

²⁰ R.D. Burman (1939–1994) was a trailblazing Bollywood music director whose work redefined film music by fusing Indian classical, folk, and Western genres. Known for his innovative use of electronic instruments and experimental soundscapes, R.D. Burman brought a modern sensibility to Bollywood music in the 1960s and 1970s.

Forms of resistance to cultural imperialism are evident in the continued popularity and prosperity of regional music industries, such as those in Tamil Nadu, Bengal, and Punjab. These industries develop distinct musical styles that resist assimilation into global pop trends. Similarly, popular musical traditions from different regions of India continue to coexist and sometimes merge with pop music without being absorbed by it.

Bollywood also shows us how some Indian musicians have begun to incorporate Western harmonic progressions, sometimes as a nod to their global audience, while still adhering to the modal structures of Indian ragas. For example, the work of A.R. Rahman fuses Western harmonic techniques with Indian melodic forms to create a cross-cultural musical language that resonates with both Indian and international audiences²¹. Rahman's film scores, particularly for films such as *Slumdog Millionaire*²² and *Bombay*, illustrate how Indian pop music incorporates Western harmonies in a way that is both modern and deeply rooted in Indian classical traditions.

Furthermore, to delve into specifics regarding my thesis and adequately address this topic, it is necessary to cite some of the musicians who have had a significant impact on both Eastern and Western music, leaving a great musical heritage and a source of inspiration for musicians from both cultures and beyond. Some examples of musicians and composers who have dedicated themselves to the composition of Western classical music

²¹ Rahman's fusion style is also deeply rooted in his upbringing, which combined a formal education in Western classical music at Trinity College of Music in London with his early training in Carnatic music. This allowed him to use Western harmonic progressions and Indian ragas to create his distinctive style, which resonates across cultures.

²² In the soundtrack for the internationally acclaimed film *"Slumdog Millionaire"* (2008), Rahman skillfully fuses Indian rhythms, instruments, and melodies with contemporary Western electronic music and production techniques, appealing to Indian and international audiences. Another example is the soundtrack to the film *"Dil Se"* (1998), in particular, the song *"Jiya Jale,"* which fuses traditional Indian melodic elements with rich Western harmonies and orchestrations. Again, the soundtrack for *"Lagaan"* (2001), where Indian classical elements seamlessly blend with Western symphonic structures.

are *Ilaiyaraaja*²³, *John Mayer*²⁴, *Priti Paintal*²⁵, *Naresh Sohal*²⁶, and *Reena Esmail*²⁷; not least, *Ravi Shankar*²⁸, India's most esteemed musical ambassador, and a singular phenomenon whose artistry across all cultural and musical boundaries. On the other hand, many music scholars, such as Clayton (2008), Farrell (1977), Moore (2013), Warren and Pinckney (1990), consider that in some aspects, the Indian rhythm system stands out as one of the most sophisticated globally. However, adding the caveat 'in some aspects' is crucial because different rhythm systems are developed with specific objectives and priorities.

Nevertheless, alongside Bollywood, *Hindustani Airs* illustrates the adaptation and evolution of Indian musical traditions, as viewed through contemporary cinema or the historical context of colonial encounters.

Hindustani Airs refers to the musical influence of Hindustani classical music on Western musicians, particularly during the late 19th and early 20th centuries. Hindustani classical music, one of the two major traditions of Indian classical music, has a rich history and a highly sophisticated system of melody (*raga*) and rhythmic patterns (*tala*).

Its melodic richness and expressive depth have been crucial and attractive to Western musicians. Western composers and musicians have been drawn to the emotional power and spiritual depth of Hindustani ragas, finding inspiration in their modal melodies and evocative moods.

²³ Gnanathesikan (1943), known as Ilaiyaraaja, is an Indian film composer, singer, songwriter, instrumentalist, orchestrator, conductor-arranger and lyricist who works in the Indian film industry. He is known for integrating Indian folk music and traditional Indian instrumentation with western classical music techniques.

²⁴ John Mayer (1930 - 2004) was an Indian composer known primarily for his fusions of jazz with Indian music in the British-based group Indo-Jazz Fusions with The Jamaican-born saxophonist Joe Harriott.

²⁵ Priti Paintal was trained in both Indian and Western music and studied sitar and tabla as a child and piano and composition in India. Paintal received a master's degree in ethnomusicology before moving to England to study composition at York University and the Royal Northern College of Music in Manchester with the composer Anthony Gilbert.

²⁶ Naresh Sohal (1939 - 2018) was an Indian-born composer of western classical music. He is the first composer in this tradition ever to make settings of texts in Sanskrit, Punjabi and Bengali.

²⁷ Reena Esmail is an Indian-American composer who works between the worlds of Indian and Western classical music. She has been working with Zakir Hussain and the Kronos Quartet, started Resonant Space, a video blog about the creative process, and launched Raga meets Symphony, a professional training workshop for Hindustani singers who want to learn to work with Western classical musicians.

²⁸ Shankar is renowned worldwide for his pioneering work in bringing Indian music to the West. His foresight, his passion, and his dedication to "looking forward and not backward" led him to found, in 1997, East Meets West Music (EMWMusic) is the official record label of the Ravi Shankar Foundation.

These movements helped position Indian classical traditions not just as exotic curiosities but as sophisticated and spiritually resonant art forms. This cultural climate influenced several Western composers, particularly in Britain, where India's colonial relationship with Britain provided unique exposure to Indian art and culture.

Several Western composers and musicians, among others, have been influenced by Hindustani classical music in various ways. For example, the French composer Claude Debussy was profoundly influenced by the exoticism and modal ambiguity of Hindustani ragas, which are present in the piano pieces *Pagodes* and *Estampes*.

This intellectual and cultural engagement paved the way for composers such as Philip Glass, Gustav Holst, and John Foulds to incorporate Indian music into their works, and later for mid-20th-century jazz musicians to discover a natural affinity with the improvisational and modal structures of Hindustani music.

Composers such as Gustav Holst²⁹ were among the first to incorporate Indian musical elements into their works. For example, he composed *Savitri* (1908),³⁰ a chamber opera based on a story from the Mahabharata, and Choral Hymns from the *Rig Veda* (1908–1912), where he set *Vedic texts* to music using modal structures that reflected Indian influences. (Saremba, 2002:125)

Similarly, a British composer, John Foulds³¹, sought to integrate Indian musical elements more directly into Western compositions. In works such as *Three Mantras for Orchestra* (1919–1930) and *Essays in the Ways* (1920–1927), Foulds employed ragas and rhythmic cycles inspired by Hindustani music, aiming to create a "universal music" that would unite East and West. (Collet, 1985:76)

²⁹ Gustav Holst, an English composer best known for *The Planets*, had a notable interest in Indian culture and music, reflected in many of his compositions.

³⁰ Holst's fascination with Indian culture was predominantly intellectual and spiritual, shaped by his readings of Sanskrit texts. However, he relied on translations as he had not formally studied Indian music.

³¹ John Foulds, another British composer, took a more direct approach to his engagement with Indian music. Throughout his career, he studied the sounds and structures of Indian classical music extensively. During his time in India, he composed numerous works that integrated Indian scales, rhythms, and instruments with Western orchestral forms. His signature pieces include *Essays in the Modes* (1920) and *Three Mantras* (1919–30).

Philip Glass³², an American composer, was influenced by Indian classical music, particularly the rhythmic structures of the Hindustani tala. His minimalist compositions often feature repetitive patterns and cyclical rhythms reminiscent of Indian music, as in his work *Satyagraha* (1978) and his album *Passages*³³ with Ravi Shankar.

Hindustani airs became a means for British audiences to engage with Indian music, albeit often through a colonial lens that exoticized its elements. Though innovative, these airs usually stripped Indian music of its improvisatory essence, reducing it to motifs that could be assimilated into Western forms.

This colonial legacy also influenced the teaching of Indian music in British institutions. The codification of Hindustani music through notational systems and the creation of hybrid forms were part of a broader process of cultural assimilation that often marginalized the oral traditions and improvisatory essence of Indian music.

For specific reasons, there have been objective problems related to the musical tradition between these two worlds, e.g., harmony, melodic phrases, notation, and the instruments used in the sounds they produced. Perhaps, as Farrell (1997: 21-22) explains, the lack of written notation and functional harmony made Indian music difficult for colonizers to understand³⁴. Indeed, the musicians who first attempted to combine Western and Indian ideas were not particularly concerned with authenticity and accuracy; instead, they aimed to force Indian musical ideas to fit into a Western harmonic context and to theatrically exotic aspects of Indian culture. (Woodfield, 1994: 194-195)

Overall, Hindustani classical music has had a significant and extensive impact on Western musicians, inspiring the creation of new musical styles and techniques. By adopting Indian music's melodic richness, rhythmic intricacies, and spiritual essence, Western composers and musicians have

³² Philip Glass is an American composer and pianist widely regarded as one of the most influential composers of the late 20th century. His work is associated with minimalism, built up from repetitive phrases and shifting layers.

³³ *Passages* is a collaborative chamber music studio album co-composed by Ravi Shankar and Philip Glass, released in 1990 through Private Music. It consists of arrangements by each composer around themes written by the other, and the album's content is a hybrid of Hindustani classical music and Glass' distinct American minimal contemporary classical style. The album peaked at number three on Billboard's Top World Music Albums chart.

³⁴ Meanwhile, in the late nineteenth century, some Western musicians became interested in understanding Indian music on its terms. At that time, musicologists began encoding concepts in Indian classical music, including attempts to note microtones, or *srutis*, usually using numerical cipher notation (Farrell, 1997: 54-57).

enhanced their musical vocabulary and broadened their artistic horizons.

Nevertheless, the interactions between India and the West continue to grow. Since the early 1930s, the Bollywood film industry in Mumbai, along with musicians like John Coltrane, John Mayer, and the Beatles in the 1960s, has showcased Indian musical influences.

In this regard, when I discuss the West in the fusion field, I mean to discuss it broadly: how elements of Indian music and Orientalism appear first in pop music and subsequently in jazz.

Attempts at fusion with Indian music, particularly jazz, date back to the late 1950s. However, it took the Beatles to catapult Orientalism, just in some of their songs³⁵, to the forefront and give the public an initial awareness that something was changing in the standard features of popular culture in the West and that an attempt at union and experimentation with "something unknown" was being born. They temporarily moved away from Western functional harmony and embraced the drone, modal structures, and rhythmic complexity of Indian music. The influence of Indian music on the Beatles was more fleeting, with experimentation lasting only a few years in the late 1960s. The Beatles, for example, moved away from this phase in the early 1970s.

Then, the Beatles with Indian music and Ravi Shankar with the phenomenal sitar explosion of 1968³⁶. The first Beatles song to feature an overt Indian element is "*Norwegian Wood*" from the 1965 album *Rubber Soul*. George Harrison used a sitar for the first time, not as an Indian instrument, but as a substitute for the guitar, on a Beatles recording.

Reck (1985:95-100) noted that the Beatles' uniqueness stems from their use of pentatonic scales and drones, rather than the major-minor system. Harrison blended Indian styles and techniques, creating a hybrid that was neither fully Indian nor pop.

However, Ravi Shankar doubted what relief would ever meet the West:

Western musicians lack the time and passion to dedicate years to studying. They give flavor. We think it's very childish. (Farrell 1988)

³⁵ "Norwegian Wood (This Bird Has Flown)" (1965) – "Tomorrow Never Knows" (1966) – "Love You To" (1966) – "Within You Without You" (1967) – "The Inner Light" (1968).

³⁶ Furthermore, the sitar or other elements of Indian music were increasingly present in the background and the general structure or recordings of many famous bands after the Rolling Stones, the Yardbirds, and so on.

Shankar's critique highlights his concern with the superficial engagement of some Western musicians with Indian music, particularly during the 1960s and 1970s (psychedelic era), when the fusion of Indian elements into Western music was at its peak. He complained that the essence of Indian classical music was often reduced to an *exotic flavor*³⁷, appropriated without the dedication or discipline needed to grasp its deep traditions and complexities fully.

This critique highlighted the broader problem of depthless cultural borrowing, where artists skipped the rigorous study that Indian classical music requires. For Shankar, this approach undermined the authenticity and integrity of the tradition, reducing it to a stylistic accessory rather than a meaningful contribution to the collaborative process. As explored earlier in this thesis and woven throughout its discussions, the theme of musical authenticity remains a central focus. According to Shankar, the integrity of Indian classical music was often compromised in the name of innovation, a loss that, in his opinion, could and should have been avoided, despite his pursuit of groundbreaking collaborations throughout his career.

On the other hand, the Beatles introduced a new musical value to their millions of listeners by experimenting with Indian music, which led many of them to delve into and appreciate it.

Furthermore, during this period, Indian music became so firmly linked to pop that Ravi Shankar and Alla Rakha could appear before large audiences at events like the Monterey Festival in 1968 and be greeted with the same adulation usually reserved for giants of rock. This period was the pinnacle of pop's encounter with Indian music.

The earliest examples of Indian rhythms in Western music can be traced back to the works of the French composer Olivier Messiaen, who was one of the first to recontextualize Indian rhythms in Western music, documented in works such as *Ascension for Organ and Orchestra* (1933) and the *Turangalila Symphony* (1946).

It was only when Ravi Shankar gained popularity in the West that the influence of Indian music on Western music became apparent. In this regard, it is essential to mention Ravi Shankar's collaboration with the American, Jewish, and naturalized Swiss violinist Yehudi Menuhin.

³⁷ In his autobiography, Raga Mala, 1997, 181-182.

Menuhin recorded an album with Ravi Shankar called *West Meets East*, a Grammy Award-winning release (1967). This album is based on an improvisational encounter between Hindustani music and Western classical music and symbolizes an open mind on the part of both musicians; on the one hand, Shankar relates to Western canons, and on the other hand, Menuhin wanted to travel a new path of an opening between the two worlds because of music, of his orchestra, and his pedagogical system³⁸. At the 1966 Bath Festival in England, the two musicians played a set entirely of Indian classical music. The performance was the first of its kind. No Western musician had ever played a classic raga on stage with Indian musicians before. It marked the beginning of a collaboration that ultimately brought Indian music to a Western audience.

During that meeting, Menuhin experienced Shankar's performance for the first time. He was captivated by the improvisational freedom and intricate rhythms and melodies, which led him to develop a deep appreciation for the music.

Thus, Ravi Shankar has significantly influenced jazz musicians seeking to incorporate the *ragas* and *talas* of Indian classical music into Western improvised music. Shankar was a friend of John Coltrane and was mainly responsible for the raga rock excursions from The Byrds and The Beatles. Shankar's notable film work in the 1950s includes scoring the *Apu Trilogy*, a series of internationally acclaimed Bengali movies. The first was *Pather Panchali*, and this World Pacific version from Shankar's *Improvisations* includes Bud Shank on flute. It ranks among the foremost essential collaborations between jazz and Indian music.

However, Ravi Shankar is almost single-handedly responsible for popularizing Indian music in the West³⁹, partly through his brilliant showmanship and ease of performing for Western audiences and partly because of his association with George Harrison of the Beatles.

To conclude the historical section of this extraordinary and complex Indian tradition, it is also essential to highlight the difficulties encountered by Western musicians. One substantial difference is that, as the main characteristics of each language, the flow of the melody and its rhythm

³⁸ The International Yehudi Menuhin Foundation (IYMF) was created in 1991 by Yehudi Menuhin in Brussels to realize his humanist dream: giving a voice to the voiceless through the arts. The Foundation serves as the base for implementing and coordinating many socio-cultural projects and programs, the first of which was the MUS-E programme. <https://www.menuhinschool.co.uk>

³⁹ Gerry Farrell (1997: 170)

substantially and naturally influence Indian musical composition. Therefore, Western musicians initially required assistance in understanding this type of dynamic. Except for John Coltrane, who made difficulty a strong point by using Indian modal ideas in jazz. (Govind, 2012: 78-80) Moreover, as I will address later, he was among the first musicians to incorporate Indian concepts into jazz. (Govind, 2012: 11)

1.2 Hybrid Identities: Authenticity and Fusion

In this section, I will delve into Whyton's (2010:67) thought, which argues that jazz has long since uprooted its American roots, becoming a global phenomenon and influencing - and being influenced - by various musical traditions worldwide. These intercultural interactions facilitated the integration of Indian musical elements, e.g., instruments, musicians, and musical concepts then unknown to the Western panorama, and allowed for *continuous dialogue with other musical cultures* (2010:70)

Lastly, Whyton's theme of authenticity stands as a key pillar of my thesis, grounding its investigation into the relationship between Indian classical music and jazz.

This chapter will examine how musicians from both traditions have incorporated this fusion, producing innovative works that bridge cultural divides while honoring their roots. I will begin with a historical context, move on to the role of improvisation and rhythm, cite examples of musicians who have made significant contributions to this cultural dialogue, and then conclude with an artistic and philosophical exploration of the intersection between these two realities.

The convergence of jazz and Hindustani music is a remarkable example of cultural synthesis, where two distinct musical traditions merge to create something entirely new.

Jazz, a prominent 20th-century cultural product, represents a hybrid musical form born from the interplay of African, European, and American traditions. Emerging in late 19th and early 20th-century New Orleans, it blends African-American musical practices, European harmonies, and Creole influences, fostering innovation. This hybridity mirrors the sociocultural realities of the era, particularly African Americans' quest for identity and expression in a segregated society.

Jazz's African roots shape its rhythm and improvisation. African American slaves preserved their musical traditions, including polyrhythms, call-and-response patterns, and community participation. These traditions evolved into spirituals, work songs, and the blues, which in turn formed the rhythmic complexity and expressiveness of jazz. With its blue notes and emotional depth, the blues are a central component in the development of jazz.

European influences on jazz are significant. In 19th-century America, brass bands paved the way for the development of the trumpet, trombone, and clarinet instruments. African-American musicians adapted European harmony, creating innovative music for Western audiences.

Talented early jazz musicians, such as Jelly Roll Morton and King Oliver, whose Creole Jazz Band exemplified group improvisation, laid the foundation for what jazz is today. Louis Armstrong, often celebrated as the first great jazz soloist, wowed everyone with his incredible trumpet skills and unique focus on individual improvisation, helping elevate the genre to new heights.

The 1930s swing era introduced big bands and danceable rhythms, with Duke Ellington and Count Basie expanding the harmonic palette of jazz. The 1940s bebop revolution, led by Charlie Parker and Dizzy Gillespie, shifted jazz toward a cerebral art form, emphasizing complex harmonies and rapid tempos. Jazz evolved after World War II with styles such as cool jazz, hard bop, and modal jazz, notably exemplified by Miles Davis's *Kind of Blue* (1959). The 1960s avant-garde and free jazz, led by Ornette Coleman and John Coltrane, expanded the boundaries of improvisation. Meanwhile, 1970s fusion blended jazz with rock, funk, and world music.

As Taylor (1997: 142–145) points out, jazz's openness to cross-cultural influences is a defining characteristic of its history. This adaptability has allowed jazz to interact dynamically with other musical traditions, including Hindustani music, and to create new hybrid forms.

The contemporary vision of jazz goes beyond this idea of Africa and America. Jazz is much more complex than that.

First and foremost, contemporary jazz is a testament to the genre's dynamic and adaptive nature, reflecting its ability to absorb and

reinterpret influences from around the world. Like any process, it has its benefits and drawbacks, which are critical to consider.

Whyton (2010: 1-25) explores the cultural and historical significance of jazz through its most influential figures and the myths surrounding it. He delves into how jazz musicians are often idolized, creating a heroic, perhaps altered narrative that shapes the understanding and appreciation of jazz as a genre. Among the fascinating aspects of this book is its attention to the myths of jazz - and therefore to their perception as such, inevitably influenced by the social, political, and cultural contexts in which these musicians operate, which are elements of influence on contemporary jazz culture.

This is where the concept of *authenticity* comes in. It is multifaceted and shaped by cultural, historical, and social factors.

According to Whyton, *authenticity* is often tied to narratives of origin, improvisation, and emotional expression in jazz. These narratives often reflect broader social ideals or prejudices, such as romanticizing jazz as a “pure” expression of African American struggle or framing it as a universal language that transcends cultural boundaries.

Whyton criticizes the instrumentalization of authenticity, noting its use as a marker of cultural identity in the global music industry, where it is often commodified to align with commercial interests. This manipulation can reduce the concept to a marketing tool, stripping it of its nuanced implications.

In cross-cultural fusions, such as those between Indian classical music and jazz, Whyton’s ideas (Whyton, 2010:66-95) push us to reconsider what it means to create “authentic” music. He challenges the assumption that borrowing from a tradition inherently diminishes its authenticity, proposing instead that such exchanges have the potential to enrich and redefine musical identities.

However, as Ravi Shankar's critique (in the previous section) points out, such integrations require sensitivity and depth to avoid trivializing or exoticizing the source tradition. The delicate balance between innovation and respect is essential to ensure that authenticity serves as a bridge, not a barrier, in cultural dialogue.

Furthermore, musicologist Nicholas Cook contends that authenticity in music should not be seen as an inherent or fixed trait, but rather as a socially and culturally constructed idea—one that develops through listeners' expectations, ideologies, and contextual experiences.

Cook challenges the notion of a single "authentic" way of performing or interpreting music. He argues that authenticity is often invoked in conflicting ways. For example, it sometimes refers to faithfulness to the composer's original intentions (historical authenticity) and other times to emotional sincerity or a sense of "truth" in performance (personal or expressive authenticity). However, in both cases, the listener's cultural framework primarily determines what is authentic.

Authenticity, then, is not a property of music or performances as such but something we attribute to them, and what we attribute it to depends on what we value.

Cook (1998: 85)

Authenticity, then, becomes a contested term. Regina Bendix (1997) and Keith Negus (1999:31-63) have argued that authenticity is not a fixed quality but a socially constructed value, often invoked to defend tradition, affirm identity, or resist perceived cultural invasion. In musical terms, claims of authenticity may seek to preserve the "purity" of a tradition, but they can also exclude or marginalize artists who operate across genres or cultures. At the same time, hybridity is not inherently emancipatory; as Michael Tenzer (2006: 92–96) warns, uncritical adoption of non-Western elements can risk misrepresentation or symbolic gesture rather than meaningful exchange.

In this view, authenticity is not understood as a fixed essence but as something that can evolve through meaningful engagement. Drawing on Michael Tenzer's (2006) argument that non-Western elements must be approached critically and contextually to avoid misrepresentation, this thesis argues that hybridity is most productive when it emerges from sustained study, respect, and immersion rather than superficial borrowing.

The real challenge is to promote a hybridity that arises from constant study, respect, and a deep understanding of context. Ravi Shankar warned against trivializing Indian music in Western pop contexts, where tabla grooves or sitar lines often served as exotic embellishments rather than integral dialogic components (Farrell, 1997: 189).

However, regarding the historical development of jazz, Whyton (2010:126-155) highlights the dualism and tension between the preservation of tradition and innovation. The myths of jazz icons provide a sense of continuity and identity to the jazz community. Still, they can also create rigid expectations that stifle creativity and innovation.

Indeed, this perspective is essential for understanding the dynamic nature of jazz and its ongoing evolution as a cultural and artistic form. Not only this, but I also find it necessary to dwell on this question of authenticity because I consider it to be the core of my thesis, or one of the main themes. Throughout my thesis, both in the practical and theoretical parts, the theme of authenticity — how to enhance it rather than lose or neglect it — always resonates, especially when exploring the interaction between Indian classical music and jazz.

The apparent similarities between jazz and Indian classical music, such as improvisation, intricate rhythms, and the role of the soloist—elements I will discuss later —have frequently led to fusion endeavors. Nevertheless, as Farrell (1988: 189-205) notes, these efforts often lack depth, attracting only a limited audience and failing to create a broader cultural influence, especially when compared to the significant popularity of Indian elements in mainstream music.

This observation is closely linked to Whyton's critique of authenticity, which challenges the assumption that superficial integration constitutes true artistic fusion, and to Ravi Shankar's criticism.

The debate between appropriation and collaboration also complicates these discussions. Appropriation occurs when elements of a culture are used without respect or acknowledgment of their original context, often stripping them of their meaning. This critique is levied against superficial incorporations of Indian instruments or scales in Western pop music, where tabla grooves or sitar riffs serve as exotic embellishments rather than integral components.

However, balancing preservation and innovation can be challenging, even in collaborative contexts. The rigidity of tradition can sometimes inhibit creative expression, while excessive innovation risks diluting the music's cultural essence.

Thus, Indo-Western hybrids are neither wholly traditional nor entirely innovative—they occupy a liminal space where authenticity is not a fixed attribute but rather a negotiated process. These hybrids exemplify the complexities of cross-cultural musical exchange, where the goal is not to replicate traditions but to create something new while respecting the histories and philosophies of the contributing cultures.

Before delving into this section, I would like to outline some key premises and provide clarifications.

Jazz and Indian classical music—two of the world's most significant musical languages—would initially seem to have little in common. However, Indian music, with roots dating back thousands of years, originated in India's courts and temples and is now performed in concert halls worldwide.

To better explain the differences in Indian music, I will begin with a brief parenthesis on this subject.

Indian classical music is primarily categorized into two forms: Hindustani, originating from the North, and Carnatic, from the South. Both systems utilize *raga* and *tala* in unique ways, allowing for significant improvisation that highlights remarkable melodic and rhythmic abilities. Like languages, jazz and Indian music possess their grammar, syntax, and vocabulary. They share many auditory characteristics that enhance human musical expression despite the differences. Mastery of both genres necessitates spontaneous musical creation and years of disciplined study to grasp their complexities.

Beyond melody, Indian music and jazz incorporate harmony and tonal color. Indian music maintains a more static harmony, with the *raga*'s color set against the drone, while nuanced melodic phrases emphasize these colors. Jazz, infused with richness in harmony and color, typically follows a progressive harmony model—a changing sequence of chords that may alter the fundamental or tonic.

Another key influence of Indian music on jazz is its intricate, odd-metered rhythms. The *tala* systems in Hindustani and Carnatic music are abundant in diverse rhythmic patterns, demonstrating endless possibilities for permutation and development.

However, India's intricate *tala* systems incorporate various rhythms, including those based on five, seven, and nine beats, as well as those

with more beats. Alongside these, the well-known 4/4 and 3/4 rhythms in Indian music are elevated to an impressive level of subtlety and complexity, a refinement seldom witnessed in Western music before their emergence.

Another important point that I will address in my thesis concerns improvisation. The two genres express this practice differently, while sharing a deep emphasis on improvisation as a central element of their performance.

In this regard, Bruno Nettl's studies on improvisation offer significant insights into the intersection between jazz and Hindustani music. Both traditions rely heavily on improvisation at their core, although the approaches and contexts may differ.

Nettl, a leading ethnomusicologist, emphasizes the centrality of improvisation as a spontaneous and unrestricted act deeply rooted in tradition and structure in his exploration of various world musical traditions, including jazz and Indian classical music. He argues that while improvisation in Western contexts, especially in classical music, is often viewed as free expression, it is actually much more structured in non-Western musical traditions, such as Hindustani music.

Improvisation is a common feature in many cultures, but its meaning and structure differ greatly from one culture to another. Jazz is a real-time composition in which the performer must simultaneously consider harmony, rhythm, and melody. In Hindustani music, improvisation occurs within predefined structures such as raga and tala, creating a complex balance between freedom and discipline. Nettl (2005: 84)

This observation is crucial to understanding how Hindustani music and jazz value improvisation. However, within their respective sets of rules, where the freedom of improvisation is tied to these cultural constructions, they meet on a common ground of spontaneous creation.

Additionally, this marks a significant moment for the concept of spirituality. This interaction is evident in every facet of music, serving as a mode of expression and a pathway to the final creation. For instance, while improvisation is crucial in jazz and Hindustani music, the underlying philosophical perspectives differ, adding to the intrigue of their exchange. Jazz, especially in its more avant-garde forms, has long been associated with freedom and self-expression, often linked to personal or communal spirituality. In jazz, improvisation—often seen as the pinnacle of a

musician's skill—is a spontaneous creation within a harmonic structure or form that reflects a sense of freedom, allowing the musician to express individuality, emotion, and immediate responses to the ensemble's surroundings or music. (Nettl, 1998:91)

In Hindustani music, however, improvisation occurs within more defined frameworks, namely, *raga* and *tala*. Despite the seemingly rigid boundaries, there is enormous freedom to explore microtones, melodic contours, and rhythmic variations. Musicians trained in Hindustani music are taught to improvise within these boundaries, creating a deep connection between disciplined practice and spontaneous creation; spirituality is rooted in tradition. The raga system is seen as a means of connecting with profound metaphysical ideas, with each raga being a scale, a mood, a tempo, and an emotional or spiritual state. The performance of a raga is often regarded as a form of spiritual discipline that aims to evoke specific emotions or states of being. Significantly, the spiritual dimension of Indian music resonated with many jazz musicians, particularly during the 1960s, when the search for deeper meaning in music mirrored broader social and spiritual movements.

North Indian classical music, particularly its rhythmic traditions, displays a delicate balance between structure and improvisation. While it often employs simple, repetitive compositions as frameworks for extended improvisational exploration, it also includes intricate, lengthy compositions that require precise adherence to pre-composed material with minimal improvisation. This duality highlights the depth and versatility of its rhythmic vocabulary. I will briefly introduce this concept, which I will expand upon in the relevant sections below.

In North Indian classical music, the *Kaida* is a core theme of the tabla, enabling musicians to develop variations that respect the original through embellishments and rhythmic subtleties. In contrast, *Rela* emphasizes fast tempo and virtuosity, prioritizing speed and accuracy over structured variations. Tabla players use *Relas*, fast, and virtuosic compositions to showcase their technical skill and creativity. They cycle through complex rhythmic cycles, syncopations, and variations, engaging in call-and-response exchanges with other musicians or within solo performances.

The interplay between structure and improvisation in *Kaida* and *Rela* is reminiscent of jazz, where musicians rely on chord changes or melodic

motifs to guide their improvisations. In both traditions, the structured elements provide coherence and shared understanding, while the improvisational aspects allow for individual expression and innovation.

Thus, in North Indian classical music, improvisation often involves exploring melodic and rhythmic variations within established compositions or ragas. In jazz, improvisation involves the spontaneous creation of melodies, harmonic alterations, rhythmic variations, and interactive improvisational exchanges between ensemble members.

Despite these differences, both genres share a spirit of spontaneity, creativity, and improvisational freedom, connecting artists and audiences through the expressive power of music.

Having explored the common ground of improvisation in jazz and Indian classical music, it is also essential to highlight the musicians who have ventured into this intercultural dialogue.

Many jazz artists, drawn to the intricate rhythms, modal structures, and spiritual depth of Indian music, have sought to incorporate these elements into their practice and philosophy. This has expanded the boundaries of jazz and addressed the challenges of authenticity and respect for traditions.

Indian music, particularly Hindustani classical forms, has long fascinated Western audiences. Cultural exchanges between Indian and Western music began during the colonial era when British and European musicians discovered the richness of Indian traditions. These interactions inspired Western composers to incorporate Hindustani melodies into their works, marking the beginning of a journey of cross-cultural influence.

Interest in Indian classical music grew in the early 20th century as artists and scholars explored its intricate rhythms, melodies, and philosophical underpinnings. This paved the way for jazz fusion as Western musicians explored its creative and spiritual potential.

This deeper engagement laid the groundwork for the more deliberate experiments in fusion that followed, particularly in jazz, as Western musicians sought to explore the creative and spiritual possibilities offered by Indian music. Hence, I will mention several notable figures below.

In the late 1950s, musicians such as John Coltrane and Miles Davis began using modes as a basis for improvisation, as they were a form commonly

used in jazz music. John Coltrane, in particular, was drawn to Indian musical forms as part of his broader musical awareness. He incorporated Indian elements into his music in a complex and subtle way, seeking to fuse the two musical styles.

This also occurred with Don Ellis and his group, the Hindustani Jazz Sextet, as well as John Mayer, who explored various incarnations of Indo-jazz fusion in the 1960s and 1970s.

John Mayer's attempts to reconcile the structures of jazz and Indian music were revolutionary. Despite the fundamental differences between the two traditions, he created a cohesive musical synthesis. What makes his approach striking is the depth and innovation with which he addressed the structural disparities between these two genres.

Mayer bridged these differences by employing innovative compositional techniques that respected the essence of both traditions. For example, in his pioneering Indo-Jazz Fusions⁴⁰ (1966), Mayer worked with a jazz quintet and a group of Indian classical musicians⁴¹. He structured his compositions to include tala cycles, using them as rhythmic structures and integrating Western harmonic progressions and melodic motifs that jazz musicians could improvise over freely. This double-layered approach allowed the rhythmic discipline of Indian music to coexist with the harmonic fluidity of jazz, a reconciliation that is not easy. (Farrell, 1997: 153–156)

What is particularly striking is Mayer's sensitivity in maintaining the integrity of both traditions. Rather than imposing one system on the other, he created a hybrid model in which Indian and jazz musicians could engage in meaningful dialogue⁴². (Nettl, 2005: 205–207)

Hence, there seems to be a clear divide in how jazz musicians approach Indian music. Their approach could be more balanced. Either they elaborated on the elements of Indian music in their way, redefining them in the process, like Coltrane or Davis, or, like Mayer, they tried to graft

⁴⁰ Mayer, John. Indo-Jazz Fusions. Recordings, 1966.

⁴¹ Mayer uses two groups of five instruments: alto sax, trumpet, piano, bass, drums, sitar, tabla, tampura, flute, and harpsichord. Mayer contrasts these two quintets and uses the flute and harpsichord as links between jazz and Indian ensembles. Regarding the musical material used, jazz forms are surrogates for Indian music. It was surprising how Mayer tried to reconcile the structures of jazz and Indian music in his compositions.

⁴² For example, in pieces such as Raga Jog, Mayer used the raga's ascending and descending melodic contours, leaving room for jazz-like phrases and embellishments.

jazz onto the already existing foundations and grammar of Indian music, with all the materials of the compositions firmly rooted in Indian ragas and talas⁴³.

John Coltrane, a master of bebop and traditional jazz who ultimately influenced the avant-garde and transcended the boundaries of jazz itself, drew inspiration primarily from Hindustani music later in his career. His renowned quartet, featuring pianist McCoy Tyner, bassist Jimmy Garrison, and drummer Elvin Jones, is one of the most influential jazz groups in history. The quartet delves into extended modal improvisations and temporal shifts in Shankar's music.

Regarding the use of Indian modes, jazz historian Lewis Porter, in his book *John Coltrane: His Life and Music*, quotes Coltrane (2000: 211) as saying:

I like Ravi Shankar. When I listen to his music, I want to copy it, not note for note, but in his spirit. What brings me closer to Ravi is the modal aspect of his art. I feel like I am going through a modal phase...A lot of modal music is being played worldwide every day. It is especially evident in Africa, but if you look at Spain, Scotland, India, or China, you will discover it again in every case... This universal aspect of music interests and attracts me; this is what I aim for.

Continuing (2000:259), Porter highlights that

Coltrane's main stylistic influences were not just jazz or sacred music, but also significantly from Indian classical traditions.

This underscores how Indian classical traditions had a deeper impact on Coltrane's style than his earlier gospel or jazz influences. Indeed, without India's significant influence, John Coltrane's unique combination of technique, mysticism, and deep philosophical exploration wouldn't have been achievable. Therefore, John Coltrane was among the pioneers who incorporated Indian ideas into jazz improvisation. In *Footprints*⁴⁴ and

⁴³ Raga and tala are the performance bases of contemporary North Indian classical music. All performances, whether vocal or instrumental, work primarily within this pattern.

⁴⁴ Non-functional harmony and modal fluidity resemble an "open system" akin to raga improvisation. The 6/4 meter and cyclical phrasing suggest tala cycles, though they are not explicitly Indian.

compositions like *India*⁴⁵, this influence is not only musical but also philosophical and structural, profoundly shaping his approach to melody, rhythm, and improvisation.

Moreover, John Coltrane studied African rhythms with the drummer Michael Babatunde Olatunji. Olatunji won a following among jazz musicians by infusing Nigerian rhythms with elements drawn from Ghanaian and Afro-Caribbean traditions⁴⁶.

Amid the Jazz revolution of the 1960s, John Coltrane looked to India, finding a new guiding light of knowledge and wisdom. This led him to learn under India's great sitar maestro Ravi Shankar.

Over the next few years, he devoted his life to searching for a multicultural theory of musical transcendence inspired by India's music, philosophy, and religion. His studies of Indian music led him to believe that certain sounds and scales could produce specific emotional meanings.

Anyway, the meeting between John Coltrane and Ravi Shankar was the spark that changed music forever, and had John Coltrane travel to study under the mentorship of Ravi Shankar as planned before his untimely death in 1967⁴⁷. John Coltrane pushed the jazz genre's boundaries, looking toward the East, forgetting the conceptual borders and transforming them into unique and fascinating connections⁴⁸.

John Coltrane sought balance by incorporating elements of Indian musical practice into African-American jazz.

⁴⁵ The piece features a static drone like the tampura in Indian music, enabling modal improvisation. Although "India" lacks tala structures, Elvin Jones's drumming creates a cyclical, structured rhythm that mimics Indian rhythmic flow: open, expansive, and less bound by Western swing conventions.

⁴⁶ Most notably, he created a strong relationship with John Coltrane, with whose help he founded the Olatunji Center for African Culture in Harlem. This was the site of Coltrane's final recorded performance in 1967. Coltrane wrote the composition "Tunji" in 1962, album Coltrane in dedication to him.

⁴⁷ Coltrane collected Shankar's records and was certain that collaborating with the Indian musician would increase his chances of improving his knowledge of Indian music, as he was already familiar with what he did. (Porter 1998: 209)

Trane was later introduced to Shankar in 1964, who began teaching him Indian music. Regarding these lessons, Shankar said: "I could give only the beginning and main things of Indian music, and he became more and more interested" (Farrell 1997: 191).

⁴⁸ In recordings such as *Om* (1965) or *Ascension* (1965), he completely abandoned conventional concepts of harmonic structure. Indian drone use significantly influenced much of Coltrane's music after the late 1950s. He used this concept as early as 1959 in his composition "Naima".

He started using drones and modes scales. He then used the concept of *alap*⁴⁹ in some tunes. Indeed, he found that *My Favorite Things* could be played almost as a raga⁵⁰.

Much of jazz phrasing can be linked to the essence of a single raga, particularly in its focus on exploration within a specific tonal structure. In Hindustani classical music, the emphasis is not on playing a fixed melody but on expressing the scales and moods of the raga, which serve as a dynamic and evolving melodic foundation. Improvisation emerges as the sole creative process for developing phrases and emotional nuances within this structure.

John Coltrane, during his period of engagement with Indian musical concepts, took a similar approach. Instead of providing his sidemen with a fixed melody, he offered them a chord sequence as a loose structural guide. The musicians then improvised based on the mood evoked by the harmonic progression and tempo, echoing the Indian ethos of improvisation, which is rooted in the mood of the raga. This method allowed for spontaneous interaction and reflected Coltrane's desire to transcend Western harmonic constraints, drawing inspiration from the meditative qualities and modal characteristics of Hindustani music.

In this regard, I repeat Ravi Shankar's thought:

From what we hear, jazz has only borrowed a flavor. (Farrell, 1997: 189)

Music from India now found its way into John Coltrane's compositions, not as an Oriental touch, but as an integral part of the structure. Songs like *Om*, *Naima*, and *India* have Hindu flavors. John Coltrane had a decisive influence on other jazz musicians of the time, and not least in his every role as a driving force in introducing the world to jazz music. (Farrell, 1988:200)

⁴⁹ The introduction of the raga is called Alap (speech) in Hindustani music and Alapana in Carnatic music. In Hindustani music, once the performance has begun, the articulation of the song into ornaments and melismas begins to be heard while the rhythm gradually speeds up. This section is called alap. The alap of North Indian music also seems to have inspired Coltrane in some of his work. Alap is the free-meter introductory portion of a performance of Indian classical music. In the development of the alap, the performer, explores the various ways he/she can arrive at the successive notes of the raga.

⁵⁰ Porter, L. (1999). *John Coltrane: His Life and His Music*. University of Michigan Press.

Additionally, in the late 1960s and early 1970s, keyboardist and composer Alice Coltrane embraced Hindustani music as a spiritual expression, incorporating Indian classical elements into her compositions and collaborations. Through albums such as *Journey in Satchidananda* (1971) and *Ptah, the El Daoud* (1970), Alice Coltrane offered listeners a transcendent journey into the realms of jazz and Indian spirituality, blurring the lines between East and West.

This spiritual exploration profoundly influenced her music, leading her to incorporate elements of Indian classical music, including Hindustani ragas, into her compositions. She began experimenting with modal improvisation and incorporating Indian instruments, such as the tambura and the harp, into her ensemble.

She has collaborated with Indian musicians such as Ravi Shankar and tabla master Zakir Hussain, drawing inspiration from their experience in Indian classical music.

In this context, Alice Coltrane played a pivotal role in bridging the worlds of jazz and Indian classical music, creating innovative and spiritually uplifting music that resonated with audiences worldwide. Her exploration of Hindustani music broadened jazz's sonic palette, facilitating cross-cultural dialogue and appreciation between Eastern and Western musical traditions.

From a jazz perspective, it is crucial to recognize that Miles Davis's lengthy modal improvisations on his iconic 1959 album, *Kind of Blue*, along with those of saxophonist John Coltrane, composer George Russell, and others, revolutionized the genre. These artists shifted away from the conventional jazz repertoire of Tin Pan Alley tunes and began improvising based on the scales themselves, much like the approach of Indian musicians.

Miles Davis's work, particularly on albums such as *In a Silent Way* (1969) and *Bitches Brew* (1970), incorporated an approach to improvisation and timing that echoed Indian rhythmic cycles.

Miles Davis's fusion era was characterized by looser, more expansive rhythmic patterns that moved away from the rigid tempos of swing and bebop. These patterns often allowed for more open improvisations, mirroring the non-Western rhythmic structures of Indian classical music. Although Davis did not directly adopt the tabla or sitar, his work's philosophical approach to time, space, and rhythm implicitly absorbed Indian ideas. (Lavezzoli, 2006:186)

In his thought-provoking book, jazz writer Eric Nisenson (2000) summarizes and highlights the extraordinary nature of jazz music. It is open to infinite fusions and possibilities, much like the country in which it originated—or at least the essence of that country.

Indian classical music and some jazz have strict guidelines, but artists who find freedom within them are a testament to their skill. Based on these simple truths, it is natural that Indian music continues to influence jazz in as many ways as the artist's imagination allows. Indeed, this statement applies to many attempts to fuse Indian classical music and jazz. Of course, the reverse may also apply to many Indian musicians who have incorporated jazz concepts into some of their creative projects without first developing a deep understanding of jazz.

While John Coltrane was a pivotal pioneer in incorporating Indian elements into jazz, his efforts are part of a long history of mutual borrowing between the Western world and India.

John Coltrane's pioneering work with Indian conceptions in jazz, nevertheless, continues to stand out as a significant achievement. Considering his enormous impact on the beginnings of Indian-jazz fusion, it is clear that his spirit permeates the genre. The frequent use of odd meters, modality, and other Indian-derived concepts in today's jazz illustrates how thoroughly his innovations have been integrated into this music. (Clements 2008: 174)

Consequently, Indian rhythm and its theoretical framework continued to fascinate Western composers and musicians throughout the 20th century. This is due to the intricate system of rhythmic variables within cycles, which range from simple to complex.

As a final example for this section, though I will not dwell on him at length, is Vasant Rai, a master sarod player. Rai, a shining light in the fusion of jazz and Indian classical music, built innovative and influential bridges between these two musical worlds, introducing Western audiences and jazz musicians to the profound expressive potential of the raga and the distinctive tonal qualities of the sarod, resulting in a music that was both exploratory and rooted in tradition. His work significantly influenced how Indian elements were integrated into jazz, demonstrating the depth and possibilities of cross-cultural collaboration that preserves authenticity.

Rai's performances uniquely combined the improvisational freedom of jazz with the structural complexity of the Indian raga, free to thrive within the jazz idiom. Thus, they provided musicians with a compelling model for expanding their musical vocabulary beyond the confines of conventional jazz structures.

The influence of Indian music and jazz has been long-lasting, extending far beyond popular music, and cannot be considered a passing fad. While the Beatles and other pop groups of the 1960s were undeniably inspired by Indian music, particularly by figures like George Harrison, who studied sitar under Ravi Shankar, this influence remained largely superficial and stylistic without fundamentally altering the structure of Western popular music. It was more of a cultural moment than a deep and sustained integration of Indian musical principles.

Instead, the influence of Indian music on jazz reached a deeper level, particularly in modal jazz and rhythmic structures, where Indian ideas were adopted not just as an exotic layer but as fundamental elements in the compositional and improvisational process. Musicians such as John Coltrane, Alice Coltrane, and Miles Davis were deeply inspired by Indian music, especially its spiritual depth, modal system, and complex rhythmic structures. Thus, Indian musical ideas found their way into the musical consciousness of jazz musicians on a structural level, coinciding with a period when jazz musicians were increasingly moving away from the older, more accepted means of jazz expression.

Indian music is pervasive and long-standing. Its beauty and unique melodic phrasing have inspired musicians for decades, and its exciting rhythmic language has given percussionists, instrumentalists, and even singers new resources.

In conclusion, while hybridity offers a valuable lens through which to understand musical exchange, it simultaneously reveals a fundamental tension that underpins many intercultural artistic practices: the delicate balance between integration and preservation. On the one hand, hybrid forms represent culture's creative openness and dialogic, evolutionary nature. They allow for the emergence of new idioms, aesthetic vocabularies, and pedagogical approaches that would be unimaginable within the confines of a single tradition. From this perspective, hybridity asserts that culture is not static but continually shaped through contact, translation, and reinvention.

On the other hand, musical traditions are rarely neutral. They carry dense layers of historical, spiritual, and social meaning that make them more than mere sound systems: they are lived and embodied legacies. In this context, the risk of misrepresentation, commodification, or superficial appropriation becomes a legitimate concern. This tension becomes particularly pronounced in encounters between Indian classical music and Western traditions, where fundamentally different worldviews of rhythm, tempo, and pedagogy coexist. Indian music's emphasis on oral transmission, cyclical perception, and improvisation within structured frameworks may seem at odds with Western music's emphasis on linearity, harmonic structure, and score-based learning. However, when these systems come into contact, they offer fertile ground for transformation, provided this encounter is approached with critical sensitivity and respect for cultural integrity.

Therefore, the challenge is not to resolve this tension but to inhabit it productively. In this way, hybridity becomes not a threat to authenticity but a way to reinvent it for a globally connected and musically pluralistic world.

1.3 Indian music as a bridge: education and tradition comparison

The intersection of Indian music and Western pedagogy represents a significant chapter in the history of intercultural exchange. Over the past century, the growing global interest in Indian classical music has profoundly influenced Western music education, inspiring educators and students to incorporate elements of Indian music into their teaching and learning practices. In this context, I intentionally use the term intersection instead of "influence" (a more logical and obvious consideration) regarding Indian music's impact on Western pedagogy. This choice goes beyond the section's content itself, as the term "influence" carries a more hierarchical and linear implication, suggesting that Indian music contributes something to the Western side, which remains structurally unchanged. Indeed, the influence can be seen in the adaptation of key Indian concepts, such as raga and tala, the role of Indian music workshops, and the lasting impact of the relationship between guru-student⁵¹ in shaping intercultural pedagogy.

⁵¹ guru-shishya parampara.

The comparison between Indian and Western musical pedagogies helps illuminate how cultural traditions shape approaches to learning, teaching, and understanding music. By examining these differences and points of contact, this study aims to foster a deeper understanding of how rhythm, improvisation, and transmission are cultivated across cultures. Such a comparative analysis not only highlights the richness of each tradition but also offers pathways for meaningful intercultural dialogue, innovation, and ethical hybridization in contemporary music education.

Indian classical music, whether Hindustani or Carnatic, offers a pedagogical vision that is not only didactic but also transformative. Rooted in deep oral traditions and guided by intimate mentoring, it contrasts sharply with the institutional, score-based logic of Western conservatory models.

Nevertheless, the persistent tension between integration and preservation in Indian and Western music pedagogies remains central to any intercultural musical engagement. It reflects the broader challenge of honoring traditional lines while promoting innovative and hybrid approaches to music learning and performance.

This tension is central because pedagogy shapes how music is taught, internalized, and transformed. When these two systems intersect, a tension arises, raising significant questions about their preservation and integration.

Despite these tensions, incorporating Indian methods has enriched Western pedagogy, encouraging Western musicians to reconsider rhythm and improvisation in a uniquely Indian way. It has introduced new creative opportunities, highlighting that authentic learning requires ethical commitment, patience, and attentive listening. The ongoing dialogue between traditions is shaped by evolving pedagogies, shared experiences, and a mutual commitment to upholding musical integrity.

When exploring the connections between Indian classical music and Western educational systems, it's crucial to understand how these traditions serve as repositories of knowledge and educational frameworks that reflect cultural values, artistic priorities, and unique modes of comprehension. Hindustani music, celebrated for its vibrant oral tradition and focus on improvisation within established guidelines, contrasts sharply with the notational and formalized methods found in Western conservatory education. Understanding how this educational tradition functions and how it differs from or complements Western approaches is

essential for investigating rhythmic hybridization, as it illustrates how musicians learn to listen, internalize, and innovate across diverse cultural landscapes.

Nonetheless, as Nettl (2015:251-256) points out, traditions encompass ingrained values, philosophies, and cosmologies that resist superficial adoption. Pedagogy is inherently biased; it conveys cultural perspectives as well as technical skills. This distinction is especially clear when contrasting the oral, embodied, and immersive learning approach of Indian music with the written, institutional, and curriculum-driven framework characteristic of Western education.

As I have previously discussed, Western composers and educators have drawn inspiration from Indian music, thereby enriching their creative and academic pursuits. Nevertheless, incorporating Indian music into Western educational contexts presents certain complexities. The contrast between the oral traditions of Indian music and the notation-centric methods of Western systems underscores the challenges and possibilities inherent in the cultural blending of music education.

Hindustani music often takes center stage in discussions about East-West fusion, but Carnatic musicians are equally significant. Since my thesis focuses primarily on Hindustani music, I will briefly discuss Carnatic music, which has also formed its own cultural exchange with Western music. In terms of fusion, Carnatic music is increasingly incorporating Western styles, such as jazz and contemporary classical music, fostering a dialogue that balances structured improvisation with accessible modal explorations.

The Hindustani and Carnatic traditions offer invaluable insights into music education, albeit from different perspectives. Hindustani music, which focuses on improvisation and the guru-student relationship, has long fascinated Western musicians and educators with its dynamic approach to melodic and rhythmic development. On the other hand, Carnatic music emphasizes structured learning through well-defined sequences, promoting precision in theory and performance.

In Indian classical music, pedagogy is deeply rooted in the ancient *guru-shishya parampara* (teacher-student tradition), which emphasizes a highly personal and immersive teaching style. Students or *shishyas* begin their journey with foundational programs that introduce them to rigidly defined exercises, scales, and compositions in Hindustani or Carnatic music. This structured initial phase focuses on developing the technical

foundations, i.e., vocal modulation, rhythmic precision, and instrumental proficiency, through rote learning and repetition, which are fundamental elements of the process. (Ruckert, 2004:54-58)

This system prioritizes extensive practice (*riyaz*), memorization of compositions, and the understanding of subtle stylistic details through sustained and direct engagement with the teacher⁵².

Although discipline plays a role in Indian music, *riyaz* is fundamentally connected to self-transformation achieved through repetitive practice and deep engagement. Students must be dedicated to their practice, invest time in the *raga*, and show devotion to their guru. As Ruckert (2004:67) notes, the *guru-shishya* relationship demands *an emotional and ethical commitment that binds teacher and disciple well beyond the lesson*.

However, as students progress, the focus shifts to more intimate, one-on-one tutoring sessions with the *Guru/Ustad*, where the unnoted and nuanced elements of the tradition are passed down orally. The relationship between the *guru* and the student is significant on cultural, social, and musical levels.

Mentoring often goes beyond music, influencing the student's character and worldview. The teacher-disciple relationship is essential for conveying stylistic subtleties and improvisational techniques, especially in *tabla* education. Oral transmission ensures that each student carries on the personal style of their guru, preserving continuity and diversity within the tradition. (Kippen, 1985)

Discipline is a fundamental tenet of the Indian classical music tradition, deeply embedded in its pedagogical frameworks and performance practices. This discipline manifests in a rigorous, years-long apprenticeship under a guru, accompanied by the internalization of compositional forms, *talas*, and rules of improvisation. However, this high level of structural rigor should not be confused with creative constraint. On the contrary, as scholars such as Peter Manuel (1989: 6–8), T. Viswanathan and Matthew Harp Allen (2004: 24–28) point out, Indian classical musicians operate within a disciplined framework precisely to cultivate deeper forms of creativity, where innovation arises not from abandoning structure, but from masterfully navigating and bending it. The

⁵² For example, Ravi Shankar's *My Music, My Life* (1968) discusses how, in his early training under Ustad Allaiddin Khan, the emphasis was not simply on learning compositions but on understanding the spiritual essence of music, which could only be absorbed through close personal interaction.

apparent paradox is that rigid discipline in Indian music serves as a creative catalyst, enabling performers to engage in spontaneous elaboration while remaining rooted in tradition. Therefore, discipline in this context should not be understood as suppressing creative agency but as the necessary condition for its more profound expression.

Thus, concerning the essence of traditional Indian music education, which involves rigorous discipline, structured practice, and a deep understanding of theoretical concepts, Shankar (1983: 112) emphasizes that

the pedagogical system is designed to instill a disciplined approach to practice and performance, ensuring a solid foundation in the theoretical fundamentals of music.

In contrast, Carnatic music pedagogy is characterized by a more structured and systematic approach. It typically begins with fundamental exercises, such as basic scales, and progresses to more complex exercises and simple compositions before moving on to more intricate forms. This process follows a graded sequence that ensures a thorough understanding of technical proficiency and theoretical knowledge.

While both traditions value the role of the guru, their emphases differ: Hindustani music prioritizes the development of improvisational skills and individual expression through prolonged and immersive tutoring. In contrast, Carnatic music focuses on precision and adherence to compositional structures, introducing improvisation later in training. This reflects a broader philosophical divergence, where Hindustani music seeks to evoke the mood of a raga through spontaneous creation. Conversely, Carnatic music strives to strike a balance between compositional fidelity and creative interpretation. As K.G. Vijayakrishnan (2007: 56) articulates,

The structured approach in Carnatic pedagogy facilitates a clear understanding of the grammatical framework, which supports both composition and improvisation.

Hence, in Hindustani pedagogy, music is not merely learned; it is deeply assimilated.

In Hindustani pedagogy, the method of transmitting and internalizing music distinguishes assimilation from learning. As I have explained, the Hindustani pedagogical system encourages students not only to understand or perform a composition but to absorb music at a cellular level through repetition, imitation, and intuition, over years of engagement with music, often in close contact with a teacher. Here,

learning is not merely cognitive or technical; it is embodied, intuitive, and often spiritual. In this context, “assimilation” signifies that musical knowledge becomes second nature, inseparable from the musician’s voice and identity. In contrast, many Western educational systems, even at higher levels, often emphasize external references such as reading notation, mastering repertoire, and preparing for exams or performance outcomes. While these methods also cultivate strong musical competence, they tend to be more objective and task-focused, particularly during the initial stages of learning.

Thus, it’s not that other systems lack deep learning, but instead that Hindustani pedagogy is uniquely designed to encourage assimilation from the outset, using techniques such as immersion, oral repetition, and a more fluid, cyclical relationship with knowledge.

However, the interaction of Indian and Western music education took a serious turn during the colonial period. British administrative, military, and missionary institutions brought European art music to Indian cities via schools and churches. This exchange was vital, as Indian musicians adopted European harmonies and orchestrations, while Western musicians explored Indian modal scales and rhythms.

Western notation systems influenced the documentation of Indian music; however, musicians primarily relied on oral traditions. Colonial educational institutions introduced new methods for documentation and teaching, leading to the formalization of ragas and compositions; nonetheless, many musicians continued to prefer their traditional practices.

The advent of Western orchestral music introduced the concept of large ensembles and complex orchestrations, contrasting with the traditional Indian approach, which focused on solo performances or smaller groups. As discussed in the previous chapter, these new concepts of group performance greatly impacted Indian music, especially in the emergence of fusion genres and Bollywood music.

In response, various institutions have developed courses that integrate Indian classical music into worldwide educational frameworks. These programs present Indian concepts such as *raga*, *tala*, and improvisation techniques, thereby broadening accessibility to a broader audience. Meanwhile, Western music education has made inroads into urban areas of India, where conservatories and private institutions now offer courses in Western music theory, piano, and orchestral studies. This exchange of

knowledge has fostered musicians adept at navigating both musical traditions.

Likewise, institutional exchanges, like workshops, artist residencies, and international festivals, have fostered collaboration. For instance, global initiatives like the *Ravi Shankar Foundation* and the *Silk Road Ensemble* have created platforms for musicians to share their traditions while exploring new hybrid styles⁵³.

Thus, the connection between Western classical and Indian music is defined by a vibrant and ongoing exchange of concepts, techniques, and aesthetics. Indian music has been influenced by Western harmonic structures, instrumentation, and ensemble formats, while Indian rhythmic and melodic ideas have deeply inspired Western musicians.

One significant distinction between Indian and Western music education is the function and prevalence of notation. In the Western classical tradition, music is primarily conveyed through written scores, which act as both repositories of knowledge and prescriptive guides for performance. This focus on musical literacy aligns with a broader educational model centered on visual documentation, textual authority, and standardization⁵⁴. Conversely, Indian classical music, especially within the Hindustani tradition, is noted for its intentional lack or minimal employment of written scores. This approach stems from an epistemological perspective that values aural transmission, memory, and practical engagement.

Bonnie Wade (1998:102) notes that this decision is both purposeful and beneficial for learning. It compels students to interact more closely with the sonic elements, requiring them to listen attentively, replicate accurately, and internalize completely. Music exists not on paper but within the body, voice, and breath of the performer. This learning approach fosters a unique form of precision, rooted not in visual fidelity but in nuanced listening and developed motor memory.

⁵³Similarly, online music education has transcended geographical boundaries, enabling numerous Western musicians to integrate elements of Indian music into their works, thereby driving global musical innovation.

⁵⁴ Western music education is typically institutionalized and follows a conservatory model. It offers a broad curriculum, including sight-reading, music theory, ensemble playing, and technical studies. Instruction is standardized with textbooks, graded exams, and structured lesson plans. The Western approach emphasizes reproducibility and accuracy, particularly in classical traditions where adherence to the written score is a primary goal.

Discipline holds different meanings in these traditions. The concept of discipline in Western music pedagogy is equally rich and contrasts significantly with the Indian notion of *riyaz*. In the Western context, it often relates to structured practice, meeting notational standards, and ensuring technical accuracy in institutional settings such as conservatories. This model has produced many highly skilled performers, often prioritizing precision over interpretive flexibility during initial training. When improvisation is part of the curriculum, it is mainly confined to jazz or contemporary styles and is often constrained by harmonic analysis and notation. Unlike the immersive, open-ended practice of Indian *riyaz*, Western discipline frequently centers around the score as the primary authority in music, reducing the body's role to a tool for performance rather than a means of deeply internalizing the music.

While both systems strive for mastery, they differ in methods and philosophy. Indian music views discipline as a journey toward embodied knowledge, emphasizing memorization over notation and favoring internalization over imitation. In contrast, Western pedagogy frequently sees discipline as a tool for replicable precision, relying on external documentation. These distinctions significantly impact cross-cultural rhythm training and our comprehension of how hybrid musicians balance structure with spontaneity.

A vital issue regarding the integration of two distinct pedagogies is the convergence points established by solfège and rhythm, which have had a profound impact on Western teaching methods.

In Western tradition, time is often viewed as linear, with rhythmic structure guided by bar lines and metric accents, rather than cyclical patterns. This fundamental distinction has a significant impact on rhythm teaching, perception, and improvisation. (Ramakrishnan, 1990: 61-65)

In Carnatic music, *Konnakol* and *Solkattu* are spoken rhythm systems essential for learning, composing, and internalizing rhythmic structures. Although the two terms are often used interchangeably, especially in contemporary pedagogy, distinctions exist in their usage, function, and cultural significance context⁵⁵.

⁵⁵ In many educational contexts, *Solkattu* can refer to clapping and reciting simultaneously, while *Konnakol* often features a more artistic or performative rendering of the same phrases. However, the boundaries between the two are blurred, and in practical terms, the same set of syllables can be used for both practice and performance.

Konnakol, a vocal art form that features percussive syllables, is recognized as both a pedagogical and a performance discipline.

Solkattu, by contrast, refers more broadly to the teaching method of conveying rhythm through syllables. It involves using hand gestures (tala) in conjunction with vocal recitation. These gestures outline the rhythmic cycle, helping the learner connect the spoken rhythm with the foundational tala structure.

Konnakol, which is now part of specific Western percussion courses⁵⁶, enriches the understanding of rhythm in Western contexts, motivating students to experience rhythm beyond the limitations of bar lines and fixed meters. (Reina, 2016: 42–49). This impact is particularly evident in jazz and contemporary classical music, where improvisation and intricate rhythms are highly valued.

Similarly, *Solkattu*⁵⁷ has become a primary reference in Western percussion teaching. It helps Western musicians internalize intricate rhythmic patterns without relying on notation, effectively bridging the oral and written traditions (Nelson, 2008: 76–84).

Although these adaptations have enriched Western pedagogy, they also highlight significant challenges.

The transplantation of Indian pedagogical methods into Western contexts often risks diluting their cultural and spiritual significance. (Nettl, 2015: 251–256)

In his broader exploration of how musical traditions are conveyed between cultures, Nettl highlights that pedagogical frameworks serve not just as practical tools but are intricately woven into cultural cosmologies, values, and social frameworks. His argument strongly reflects the difficulties encountered when incorporating aspects of Indian music, such as the *guru-shishya parampara*, into Western institutional or conservatory settings. Nettl warns that merely adopting surface features of Indian teaching, such as rote learning or improvisation, without addressing the philosophical and relational foundations of the tradition could diminish a rich system of embodied knowledge to mere stylistic decoration.

This observation serves as a crucial reminder that hybridity should not be confused with appropriation or reduction. Instead, it requires a nuanced

⁵⁶ In conservatories such as: Berklee College of Music (USA), Royal Academy of Music & Guildhall School of Music (UK), Conservatorium van Amsterdam (Netherlands) and Banff Centre (Canada).

⁵⁷ South Indian syllabic rhythmic language.

engagement with the pedagogical principles that support each tradition, ensuring that respect, discipline, and spiritual depth are maintained even when expressed across cultural boundaries.

Additionally, Indian pedagogy's emphasis on oral transmission and improvisation may conflict with the Western approach, which is based on notation and formal assessments. Michael Tenzer's (2006: 92–96) analytical studies of world music examine how integrating Indian elements into Western music education necessitates a delicate balance between preserving tradition and promoting innovation.

Tenzer provides various insights on this topic, but I would like to highlight a few key points. The scholar warns that when Indian techniques, like *Konnakol* or *Solkattu*, are integrated into Western music education, they may lose their cultural and philosophical essence. As a result, although Western musicians may acquire *konnakol* as a technical ability to better grasp rhythm, they may overlook its broader cultural implications, including its ties to Carnatic performance traditions and its significance in relation to the mridangam drum.

However, despite these obstacles, including Indian elements in Western music education can foster considerable innovation that challenges traditional Western concepts of rhythm and timing.

Therefore, achieving a balance between honoring Indian music traditions and promoting creative innovation is vital. This task poses challenges, as it demands a profound engagement with the cultural and philosophical roots of Indian pedagogy. It also involves recognizing the significance of spirituality, the teacher-student connection, and the historical development of Indian music within the educational journey. This exploration enables Western musicians to expand their creative perspectives while respecting their traditional origins. (2006:245–261)

This process integrated Indian music into Western music in a unique way, creating a distinct subgenre. As a result, Western musicians could incorporate elements of Indian music and blend them with traditional Western styles. (Slobin, 1992: 1-87)

However, it is essential to highlight that Indian music has gained a significant foothold in the West, particularly among educated audiences who value its finest artists. Students at all educational levels are also learning and thriving in this field. (Sangeet Research Academy, 1996: 100).

Additionally, the interest of Western composers in Indian music has occasionally, though indirectly, been pivotal in fostering cross-cultural awareness within Western music education.

As noted in the earlier section, composers such as Gustav Holst (1874–1934), John Foulds (1880–1939), and Philip Glass (born 1937) have been inspired by Indian music, incorporating its elements into their compositions and subsequently shaping how it is taught in the West. These interactions have influenced teaching methods, prompting Western educators to explore interdisciplinary approaches to education. Clearly, there are significant methodological and pedagogical differences between the two musical and cultural realms.

A notable example is Gustav Holst, whose engagement with Indian philosophy and Sanskrit literature inspired works such as *Savitri* (1908) and *Choral Hymns from the Rig Veda* (1908–12). Although Holst did not directly incorporate Indian musical materials in the form of rāga or tāla, his interest marked a shift in how Western art musicians approached non-Western cultures, not as exotic curiosities but as legitimate sources of spiritual and artistic depth. As Ghuman (2014: 75–98) argues, Holst's openness contributed to a broader rethinking of musical boundaries and pedagogical narratives, especially in the early twentieth century, when composers began to engage more critically with global traditions.

Ghuman specifically links Holst's Eastern interests to a "liberalizing impulse" in British music education at the time, where the incorporation of Indian texts and ideas expanded the curriculum beyond the standard European canon. However, in the second half of the twentieth century, composers such as John Foulds and Philip Glass more explicitly integrated Indian musical techniques, including modal improvisation and additive rhythms, into their works, directly influencing the language of contemporary music and its pedagogy. Glass, in particular, has spoken extensively of the impact of his studies with Ravi Shankar on his rhythmic sensibility, which subsequently shaped how rhythm is taught and understood in minimalist and postminimalist composition programs (Glass, 1987).

Thus, the pedagogical role of figures such as Holst has nonetheless been formative in opening up Western music education to Indian cultural and intellectual frameworks⁵⁸.

⁵⁸ This historical arc supports the current integration of Indian rhythmic concepts into Western music education, whether through ethnomusicology programs, cross-cultural

The theoretical differences between oral transmission and notated teaching, as well as those between embodied memory and written structure, become particularly evident in cross-cultural environments, such as seminars and workshops. These venues, designed to bridge Eastern and Western musical traditions, serve as vibrant laboratories for assessing and challenging pedagogical beliefs.

An exciting book, *Indian Music and the West*, provides a particularly illustrative example. It describes a highly successful seminar held in winter 1996 at the National Center for the Performing Arts in Mumbai. The Sangeet Research Academy organized it in collaboration with the Rotterdam Conservatory.

The seminar offered a crucial opportunity for scholars and musicians to explore the profound impact of Indian music on Western traditions. This book is pertinent because it frames the cultural and musical exchange, providing both theoretical perspectives and practical insights. It delves into topics such as the incorporation of Indian scales and rhythms into Western music, key figures who bridge these traditions, and the broader sociocultural implications of this fusion.

Indian educators noted that the obstacles faced were both linguistic and conceptual. Western-trained students often struggled with the lack of notation and the requirement for memorization. Meanwhile, Indian instructors struggled to express nuanced rhythmic concepts without relying on written explanations. Tenzer (2006:97) points out that "the encounter between musical cultures is not simply a sonic event, but a clash and negotiation of epistemologies." These interactions highlight significant differences and the opportunity for pedagogical innovation through collaborative adaptation.

In this regard, Coomaraswamy (1917: 164-165) asserts:

As Indian music is not written and cannot be learned from books, except in theory, it will be understood that the only way for a foreigner to learn it must be to establish between himself and his Indian teachers that special relationship of disciple and master who belongs to Indian education in all its phases: he must enter into the inner spirit and must adopt many of the external conventions of Indian life, and his study must continue until he can improvise songs in Indian conditions and to the satisfaction of Indian professional listeners. He must

improvisation workshops, or the growing interest in oral rhythm training methods such as konnakol.

possess an artist's imagination, a vivid memory, and an ear sensitive to microtonal inflections.

The experiences recounted in seminars and workshops reflect a profound disjuncture between musical worldviews. These encounters highlight how rhythm is taught and how it is understood, embodied, and prioritized in different systems.

These moments of friction, however, also signal transformation. When students and teachers abandon familiar patterns, they are encouraged to adopt hybrid strategies: new forms of explanation, integrated learning practices, and mutual accommodations. These workshops become what Homi Bhabha (1994) calls a Third Space: a place not of assimilation, but of negotiation, where exchange subtly alters both traditions. Thus, these pedagogical frictions observed in those workshops reveal not so much deeper challenges as great opportunities in intercultural rhythm education.

In summary, the claim that Indian music has had a significant impact on Western music education is complex and multifaceted. The integration of Indian musical elements into Western teaching methods has facilitated a vibrant exchange of ideas rather than simple imitation. This interaction has led to notable changes in pedagogy, particularly in genres such as jazz. Indian rhythmic concepts are now incorporated with Western practices, fostering a deeper understanding of timing and improvisation. However, this fusion has not come without its challenges and disagreements. While some elements of Indian music have been embraced and integrated into Western educational approaches, others encounter resistance or misinterpretation, often stemming from the distinct philosophical and cultural roots of both styles. Consequently, the influence of Indian music on Western pedagogy exemplifies a complex interplay in which both traditions develop and enrich each other through ongoing exchanges. Through these examples, I aimed to showcase the attention to and evolution in Western music education, particularly in rhythm, improvisation, and the understanding of intercultural influences.

In this extensive section, I aim to highlight a new perspective on my thesis through various considerations, including new insights into the evolving relationship between Indian and Western music, the innovative potential of cross-cultural collaborations, and the outcomes that have resulted. I examined how Indian musicians engage with Western music, highlighting the creative cross-cultural exchanges that influence contemporary musical practices. These collaborations serve as musical

bridges between East and West, continually redefining the boundaries of traditional music from both musical worlds. I approached these passages to emphasize the complexities of cultural interaction, celebrating its beauty and the ever-evolving dynamism that enables—and has enabled—musicians to navigate multiple cultural spheres, merging the old with the new.

Therefore, this chapter does not aim to present Indian pedagogy as an alternative to Western systems but rather as a fertile ground for confrontation, prompting us to question our assumptions about musical knowledge, learning, and cultural identity. The incorporation of Indian rhythmic, melodic, and improvisational structures into Western systems has transformed the way music is taught, perceived, and experienced. It has enriched technical repertoires and encouraged critical reflection on the ethical, philosophical, and relational foundations of music education.

Western artistic references

This section serves as a bridge to the practical and performance-oriented focus of my thesis. Establishing this foundation is essential not only for shaping the thesis's future trajectory but also for refining and coherently channeling my area of interest. Since performance is at the core of my research, this section introduces the references and artistic influences I have chosen and explains the rationale behind these selections.

I analyzed two books and videos based on performances, specifically those of the four musicians: drummers Dan Weiss, Bernhard Schimpelsberger, Attila Gyárfás, and tabla player *Trilok Gurtu*.

As my main instrument, it is essential to begin with the drummers, discuss their role and the jazz drums, and emphasize the various evolutions of this instrument, driven by the needs of its protagonists.

The drums hold a significant place in popular music. As jazz emerged in the early twentieth century, many drummers began to pursue new musical paths and techniques, fueled by their creativity and the diverse needs of their fellow musicians. This development underscores the evolving rhythmic components that shape the groove. Kenny Clarke, a trailblazing drummer, redefined the swing pulse by highlighting the ride cymbal and experimenting with rhythmic variations. Unaware of the extent of his impact, his innovations changed the perception of rhythm in

jazz, making it notably more fluid and fundamentally shifting the drummer's role to that of a devoted accompanist and constant source of inspiration for the entire band. (Reimer, 2013: 17)

Subsequently, we must mention the key drummers, Gene Krupa and Buddy Rich, who enhanced the concept of the drum solo, making it a staple in most bands' sets. Meanwhile, Max Roach explored coordinated independence, introducing an even greater level of freedom and complexity, reaffirming that drums can be seen as a melodic instrument and a vital part of musical composition.

Thus, once regarded merely as an improvised instrument, the drum set has evolved into a solo instrument in Western music, complete with established notation and repertoire.

The evolving perspective on music and drums, particularly in terms of engaging with and elevating it, highlights what I believe is a transformation of this instrument. No longer merely a "timekeeper", it now serves as a melodic instrument. Consequently, the drummer's role evolves, leading them to adopt a mindset similar to that of a composer. Later, as the drums enter this new musical context and advance it, other drummers feel a different need to approach various musical and cultural realities, such as Brazilian, Cuban, traditional South American music, and Indian music, which were in vogue among highly talented musicians at the time.

An example, if not the first one, is given to us by the great jazz drummer Buddy Rich⁵⁹ with the studio album *Rich à la Rakha*⁶⁰ (1968) with the collaboration of one of his generation's most essential tabla players, Alla Rakha. In the record, Indian musical influence is particularly prominent. Rich imitates Indian phrases according to his famous drum language, a *marching drum* style that emphasizes the same accents as the tabla, allowing for a typical dialogue to be achieved. Soundwise, Rich turns off the snare to achieve a darker sound with plenty of harmonics, which evokes an Indian vibe. Thus, in the disc with Indian nuances, rhythmic battles ensue between the two protagonists, great exponents of their instruments, the era, and the musical genre to which they belong. There

⁵⁹ Bernard "Buddy" Rich (September 30, 1917 – April 2, 1987) was an American jazz drummer, songwriter, conductor, and bandleader. He is considered one of the most influential drummers of all time.

⁶⁰ The album features the great sitar player Ravi Shankar in the role of conductor. The training is therefore composed of Buddy Rich, Alla Rakha, Paul Horn - flute, and Nodu C. Mullick - tamboura, manjeera.

is an exchange of imitations rather than research and crossover, and Rakha's mastery and percussive sensitivity are highly prominent.

Alla Rakha was instrumental in introducing the tabla to international audiences through his collaborations with renowned Western musicians, including Ravi Shankar, Yehudi Menuhin, and George Harrison. His captivating performances showcased the tabla's rhythmic complexities and melodic possibilities, captivating international audiences. His dynamic style and impeccable technique have helped elevate the status of the tabla as a solo instrument and established its presence on the global stage.

Alla Rakha and his son, Zakir Hussain, are undeniably central figures in the internationalization of the tabla. Each has left an indelible mark on the global music scene through their virtuosity, innovation, and cross-cultural collaborations. Together, the two tabla players have played a transformative role in raising the profile of tabla on the world stage, showcasing its versatility, richness, and expressive potential to audiences of all backgrounds. Their contribution to the internationalization of the tabla has broadened the horizons of percussion music, fostering greater cross-cultural appreciation and understanding, and embodying the power of music to transcend borders and unite people across continents.

In recent years, several jazz drummers have delved into Indian classical music. Rather than just mimicking the sounds, these knowledgeable drummers actively engage with the music, making thoughtful decisions about how to incorporate rhythmic and melodic patterns into their drumming. Consequently, I have chosen the two drummers mentioned earlier as my references, which I will outline below.

To begin with, *Dan Weiss*⁶¹ is an American jazz drummer, composer, and tabla player who studied jazz drums and classical composition under the guidance of John Riley and tabla with guru Pandit Samir Chatterjee.

He serves as a significant source of inspiration, representing the true essence of a musician, one who transcends the roles of merely a drummer or percussionist. He illustrates the hybrid character of music by blending various techniques and musical styles. This combination effectively cultivates a distinctive stylistic and technical vocabulary, setting the stage for improvisational ideas that challenge the

⁶¹ As a leader, Weiss has released several albums under his name, such as a tabla solo cd "3dcd" (2007), "Teental Drumset Solo" (2005), and "Jhaptal Drumset Solo" (2011). where he performs in the Indian classical repertoire on drums.

long-standing musical boundaries in drumming. Weiss's in-depth examination of jazz, North Indian classical music, and contemporary classical is evident in his compositions. These works feature sharp melodies influenced by the raga system of Indian classical traditions, complex rhythmic cycles from Indian music, and advanced drumming patterns.

Weiss's compositional efforts focus on faithfully adapting the tabla's language to the drum set, adhering to specific sound and rhythmic guidelines, performing traditional tabla compositions, and improvising within the same framework, utilizing a drumming language.

Weiss is among the first Western drummers to venture into a meeting of this kind. Although his application is interesting, it is to be considered the beginning of several possibilities that the hybrid in this specific theme can offer. Therefore, his work applied the tabla language to drums as a solo instrument—not in an ensemble project—i.e., using a musical language from an Eastern origin musical instrument in a Western context.

Weiss is known for directly incorporating tabla rhythms into his drumming, a clear sign of the profound and lasting impact of Indian music on jazz. This extends beyond the occasional use of Indian instruments or melodies; it is a comprehensive integration of Indian rhythmic theory into the structural framework of jazz.

Bernhard Schimpelsberger is an Austrian drummer, tabla player, and composer. He studied jazz drums and percussion at the Conservatory of Linz and learned Indian classical rhythms from masters like Suresh Talwalkar and Trilok Gurtu. His exceptional fusion of European and Indian rhythms, combined with extensive studies in rhythm from around the world, has made him a sought-after collaborator for artists across various genres. Additionally, he excels at integrating Indian and Western rhythmic concepts into Western music.

Unlike Weiss, who uses the language of the tabla, he mainly uses the language of *Konnakol*⁶², a rhythmic language of South India. Musicians,

⁶² It developed from the need to be able to memorize rhythm, and unlike the Western forms, especially the Western classical form, constituted by staff notation and music sheet-, in India, staff notation never really developed because the music was taught, orally from the guru to the student. So, memorizing was the focus.

especially drummers, utilize it to express rhythm and communicate with one another.

Adapting this to drums is primarily a rhythmic approach since konnakol isn't bound to any specific instrument and doesn't necessitate the comprehensive sound exploration that the tabla language does. Instead, it emphasizes rhythmic exploration to convey distinctive Indian phrases on the drum set.

He utilizes both rhythmic languages, from West and East, not as mere transpositions but as two unique options, which he applies depending on what serves the overall purpose of the music and the composition. His works make the Indian phrasing easily recognizable through sound choices — for instance, a different drum sound can effectively underscore each syllable, while also creating rhythmic and cyclic phrases that are readily apparent. Moreover, his method poses significant challenges for drummers, as drums typically produce patterns rather than phrases or cycles, thus necessitating an adaptation of technique to align with the Indian framework.

During the improvisation phase, known as soloing, he employs tabla language, displaying remarkable control and rhythmic awareness as he navigates complex Indian rhythmic phrases. Consequently, Schimpelsberger offers a distinctive view on how these two musical languages can be applied and interpreted. He exemplifies a composer's precision, utilizing drums, konnakol, and Indian rhythmic cycles (tala) to create extraordinary pieces and elaborate rhythmic structures, always prioritizing the music itself.

In his book, *Advanced Indian Rhythm Studies for Western Musicians*, he transcribed, translated, and simplified one of India's oldest and most comprehensive rhythm books, *A New Approach to Tala Calculations*, by S. Rajagopala Iyer.

S. Rajagopala Iyer's book makes significant contributions to Indian musicology, particularly in the areas of rhythmic theory and practice. Furthermore, it highlights the applicability of his methodology in various musical contexts, including the Hindustani and Carnatic musical traditions, thereby underscoring its universality and versatility.

Additionally, the book explores the mathematical frameworks underlying the Indian rhythmic system, intending to examine rhythm through a mathematical lens. Consequently, this book offers various approaches to

navigating that space, enabling the freedom to understand what to play and how to compose. This is one of the three reference books I will discuss later.

Eastern Artistic References

In this section, I introduce musicians I consider essential stylistic and musical influences for all artists, particularly drummers like myself.

To do so, I will briefly present the tabla, which I will explore in greater detail later on, along with relevant tabla players connected to my thesis.

The evolution of tabla traditions in India boasts a rich legacy of innovation, experimentation, and knowledge transfer through generations. Over time, distinct tabla styles and schools, known as *gharanas*, have developed, each featuring its own techniques, repertoire, and teaching methods. Among the most distinguished tabla *gharanas* are Delhi, Ajrara, Lucknow, Punjab, and Benares *gharanas*, each with its line of master musicians and students.

Many tabla players have made significant contributions not only to their technical and artistic skills but also to their roles as cultural ambassadors. Notable examples include Pandit Swapan Chaudhuri, Anindo Chatterjee, Ustad Ahmed Jan Thirakwa, and Alla Rakha.

Ustad Allarakha Qureshi (1919-2000), popularly known as Alla Rakha, is one of the most prominent tabla players in the West. He collaborated with Western musicians and played a pivotal role in popularizing the tabla worldwide, thereby elevating its status and respect.

He expanded the instrument's technical possibilities, developing new techniques and improvisational approaches that showcased its versatility and expressiveness. His mastery of *layakari*⁶³ (rhythmic modulation) and *tihai* (repetitive rhythmic patterns) set new standards for tabla playing and established him as one of the instrument's leading exponents.

Alla Rakha's significant impact on percussion music globally ensures his relevance for contemporary drummers aiming to expand their musical perspectives. His unmatched technical proficiency on the tabla serves as a standard for those looking to refine their abilities. Beyond just technical

⁶³ Laya is the number of beats played in the time period of a single beat which essentially signifies the time between two bols. Layakari is just the implementation of various Layas.

skill, his unique blending of classical Indian rhythms with Western music encourages drummers to pursue innovative, creative paths. Additionally, his role in teaching and mentorship has a profound influence on emerging percussionists, providing essential guidance on musical expression and cultural heritage.

In the next section, I will highlight tabla players noted for their artistic talents, particularly in blending Indian classical music with Western styles, notably Jazz.

To begin with, *Trilok Gurtu* (1951) is an Indian percussionist and composer whose work has blended Indian music with jazz fusion and world music⁶⁴. Therefore, he is one of the musicians who best synthesizes, in his style, the encounter between Eastern and Western musical cultures, helping to broaden the notion of contemporary music. An open-minded musician, a percussion virtuoso who has played in both jazz and Indian classical music, He has been awarded numerous prestigious awards and nominations⁶⁵. He is universally recognized as one of the most innovative percussionists in the world.

Gurtu began playing the drums in the 1970s and became interested in jazz, a genre that greatly enriched his Eastern musical language. His drum set is a hybrid, i.e., a mix of tabla and Western drums.

Throughout his career, Trilok Gurtu has collaborated with numerous renowned musicians from diverse genres, releasing a variety of innovative albums that push the boundaries of traditional music categories. His albums frequently showcase a vibrant blend of sounds, rhythms, and textures, embodying his wide-ranging musical influences and imaginative outlook.

Below, I introduce some of his various collaborations related to jazz music that are worth mentioning for this thesis project. Firstly, his collaboration with the *John McLaughlin trio* in 1989 included vocal improvisations using the Indian tala talk method of oral drum notation to teach drum patterns.

⁶⁴ He has worked with Terje Rypdal, Gary Moore, John McLaughlin, Jan Garbarek, Joe Zawinul, Michel Bisceglia, Enzo Avitabile, Bill Laswell, Maria João & Mário Laginha, Robert Miles and many others.

⁶⁵ Winner of the best percussionist overall, DRUM! Magazine, 1999. Winner of Best Percussionist Overall, Carlton Television Multicultural Music Awards, 200. Winner of Best Percussionist, Downbeat Critics Poll for 1994, 1995, 1996, 1999, 2000, 2001, and 2002. Nominated for Best Asia / Pacific Artist, BBC Radio 3 World for 2002, 2003, and 2004.

Then, the album *The Crazy Saints* (1993) features a collaboration between two great artists, Joe Zawinul and Pat Metheny. Zawinul's compositions are notable for their seamless integration of subtle Indian rhythms and melodies with modern jazz and rock elements.

The last essential collaboration concerns the album *Spellbound*⁶⁶ (2013), inspired by Don Cherry, an American avant-garde trumpeter. This album is crucial to the search for intuitive music that transcends borders. Indeed, it features Cherry's mix of groove-oriented sounds, from Indian music to Afro-Cuban music, funk, free jazz, and classical and environmental improvisation.

Another prominent figure in Indian percussion is Ustad Zakir Hussain (1951—of the Punjab Gharana), a tabla virtuoso, composer, percussionist, and music producer who has upheld the tradition of Hindustani classical music. Following in his father's footsteps, Zakir Hussain has expanded the global reach of the tabla through innovative collaborations and fusion projects. His extraordinary skill and unparalleled creativity have established him as one of the world's leading percussionists, bridging genre gaps and enchanting audiences everywhere. His partnerships with musicians from various genres, including jazz, classical, flamenco, and electronic, have broadened the horizons of tabla music, fostering intercultural dialogue and artistic innovation. Hussain is not only one of the most significant Indian percussionists globally but also a musician who directs his musical expertise towards World Music. He has significantly raised the profile of tabla players through his solo performances and collaborations; notably, he made distinctive contributions to the bayan's history and technique, typically a role limited to providing bass accompaniment, whether performed solo or alongside the *dahina*.

I want to mention two of the many albums: *Global Drum Project* (2007)⁶⁷ and *Making Music* (1986)⁶⁸. The latter is considered a milestone of fusion that incorporates the influence of Indian music.

Having provided some examples in the discography section regarding the rhythmic and musical crossover, there is a need for more material in the

⁶⁶ *Spellbound* (2013). Training: Trilok Gurtu on drums, percussion, tabla, vocals, leader, Jonathan Ihlenfeld Cuniado on bass, Tulug Tirpan on piano, keyboards, Frederick Koester. and Paolo Fresu on trumpet.

⁶⁷ The *Global Drum Project* is an album by Mickey Hart, Zakir Hussain, Sikiru Adepoju, and Giovanni Hidalgo. It was awarded Best Contemporary World Music Album in 2009 Grammy Awards ceremony.

⁶⁸ This album by Zakir Hussain features Jan Garbarek, John McLaughlin, and Hariprasad Chaurasia.

bibliographic section. There are primarily books that compare the differences and characteristics of the two genres or other books and methods written by musicians who have dealt with the subject according to their point of view, thus reporting more on the primary adaptation of Indian rhythms to one's instrument without, however, paying attention to the melodic part of the rhythm itself. I will deal with this aspect further in the indicated section.

In the upcoming sections, I will examine the practical dimension of this thesis's central theme: adapting and integrating tabla language into jazz drumming. Before we embark on this exploration, it is crucial to establish a framework by tracing the historical, technical, and linguistic connections between both instruments, thus laying the foundation for meaningful adaptation.

The goal is to reinterpret specific tabla phrases and compositions on the drum set, embedding them within a jazz framework to demonstrate their transformative power. This method embodies my conviction that merging jazz with tabla rhythms can reveal deep musical possibilities. By engaging with the intricate cycles, improvisational freedom, and sophisticated techniques found in Indian classical music, jazz can gain fresh rhythmic textures and innovative phrasing.

As the thesis progresses, I aim to connect the technical and cultural elements of this exchange, redefining my drumming language. I also aim to enhance my understanding of how the intersection of jazz and tabla fosters rich opportunities for artistic innovation, providing both traditions with new avenues for growth and expression through the drums.

1.4 Tabla language

This section explores one of the world's most complex and nuanced rhythmic traditions, encompassing the technical elements and cultural context that define the instrument's identity. It delves into critical aspects of the tabla, including its history, rich and diverse vocabulary of *Bols*, and intricate structures of compositions such as *Kaidas*, *Relas*, *Laggis*, and *Tihais*, which I will address in more depth later in the indicated sections.

Moreover, this section aims to discuss tabla as an instrument and explore the broader concept of tabla as a language that communicates rhythm, emotion, and musical form within the structures of Indian classical music. Ethnomusicologists such as James Kippen and Rebecca Stewart have extensively researched and documented the development of the tabla,

providing insights into the cultural and historical dimensions of the instrument and its evolving role in both Indian and global musical contexts.

The development of the tabla is inseparable from the history of Hindustani classical music, where it evolved as a leading percussion instrument, especially within the *khaya*⁶⁹ and thumri⁷⁰ forms of North India. As mentioned in the previous section, the tabla is a hybrid musical instrument with Persian or Central Asian influences brought to India through the Mughal courts⁷¹ (XVII- XVIII centuries). Over time, the tabla has become a vital instrument in Indian classical and popular music, particularly within the Hindustani tradition.

The origins of the tabla remain a topic of debate among musicologists. Traditional narratives often attribute the invention of the tabla to Amir Khusrau, a 13th-century poet and musician from the Delhi Sultanate. This legend, though widely held, lacks a historical foundation; in fact, Kippen (1988: 22-27; 35-40) criticizes the Khusrau myth, arguing instead for a gradual evolution of the instrument from earlier percussive traditions, such as the pakhawaj and mridangam. These barrel-shaped drums, integral to northern and southern Indian music, share structural and functional similarities with the tabla, suggesting a lineage of innovation rather than sudden invention. He thus identifies the tabla as a product of cultural and musical hybridization.

The bifurcation of the drum into two separate units, the dayan (a higher-pitched right-hand drum) and the bayan (a lower-pitched left-hand drum), marks a significant departure from the pakhawaj. This double-drum configuration enables greater melodic and rhythmic complexity, aligning with the evolving needs of Hindustani classical music.

⁶⁹ Khaya, in Hindustani music, is a musical form based on a Hindi song in two parts that recur between expanding melodic and rhythmic improvisation cycles.

⁷⁰ Thumri is a vocal genre or style of Indian music. The form is, thus, connected with dance, dramatic gestures, mild eroticism, evocative love poetry, and folk songs, mainly from Uttar Pradesh.

⁷¹ The Mughal courts were instrumental in shaping the role and repertoire of the tabla. Under emperors such as Akbar and Shah Jahan, the music flourished as a sophisticated art form. Its adaptability to diverse genres, from khayal to thumri, cemented its status as a versatile accompaniment.

The tabla became a staple in court performances, accompanying vocal and instrumental music⁷².

Shifting to the historical context, the colonial era marked pivotal changes in the tabla's significance and perception. As royal patronage waned, numerous tabla players adapted to the burgeoning entertainment sector, performing in theaters and cinemas. The tabla emerged as a key component of Bollywood music, merging effortlessly with Western instruments and arrangements.

Following independence, the tabla gained worldwide acclaim, mainly due to virtuosos such as Alla Rakha and Zakir Hussain. These musicians elevated the instrument's profile through collaborations with Western artists. Consequently, the tabla's versatility and capacity to connect diverse musical traditions establish it as a symbol of global musical exchange, as evidenced (1988: 156-160).

Another essential framework for grasping the tabla is the Gharana system, a lineage that conveys the stylistic traditions and specific playing techniques of the tabla across generations. One of the most prominent Gharanas is the Lucknow Gharana, which has played a pivotal role in shaping the style and teaching methods of the tabla. Research by James Kippen provides essential insights into the history and philosophy of this tradition.

I want to emphasize this significance, as it is key to understanding both the tabla tradition and Hindustani music.

The Lucknow Gharana has significantly influenced Indian classical music by fostering distinctive musical styles and enriching the Indian musical repertoire. Its influence extends beyond India's borders, attracting numerous musicians, both Indian and non-Indian, who seek to learn and incorporate its techniques and principles into their musical endeavors. (Kippen 1988: 35-75)

⁷² Kippen notes that by the 18th century, the tabla began to eclipse the pakhawaj in popularity, especially in urban centers like Lucknow. This shift mirrored broader changes in musical aesthetics, emphasizing intricate rhythms (tala) and lighter, improvisational music. The tabla's portability and dynamic range suited these trends well. (1988-45-49)

Its practitioners⁷³ are known for their ability to interpret and communicate emotions through music. Vocal and instrumental techniques are often combined with technical agility and deep emotional expression.

The Lucknow tabla holds a significant place in both its repertoire and history due to various factors, including its rich tradition of style and technique. This tradition is deeply rooted in a cultural heritage that has been passed down through generations of musicians. It has been crucial in the evolution of tabla music, influencing the creation of various rhythmic compositions, techniques, and stylistic intricacies. Notably, the Lucknow tabla is recognized for its distinctive playing style, marked by clarity, finesse, and aesthetic sophistication.

The tabla repertoire is extensive and varied, featuring numerous rhythmic compositions (such as *Tukra*, *Kaida*, *Relas*, etc.), which highlight technical skill and artistic expression.

The bols in tabla music are intricate and diverse, ranging from straightforward rhythmic phrases to elaborate stroke patterns, particularly with syncopated accents and nuanced shifts in tempo and meter. These bols are derived from a collection of traditional compositions that have been passed down through generations within the Gharana. Compositions can delve into various rhythmic cycles, or taals, encompassing common taals such as Teentaal, Jhaptaal, and Ektaal, alongside rarer and more intricate cycles. (Kippen 1988: 35-75)

Kippen (1988:36) also contends that this oral tradition reflects an aesthetic ideal deeply embedded in Indian culture. Within this tradition, each bol (the mnemonic syllables representing distinct drumbeats) connects to both the physical act of playing and the cognitive process of structuring rhythmic concepts.

In addition to rhythmic patterns, tabla compositions from the Lucknow gharana often include melodic phrasing and tonal subtleties. Specific bols are associated with distinct pitches or tonal qualities, which allows tabla players to convey melodic forms and harmonic textures during their performances.

⁷³ The Gharana of Lucknow has produced many prominent musicians over the centuries. These include icons of Indian classical music such as singer Ustad Bade Ghulam Ali Khan, sitar master Ustad Vilayat Khan, and legendary percussionist Ustad Zakir Hussain. These artists have contributed significantly to the spread and perpetuation of Lucknow's musical tradition.

Moreover, tabla's compositions in the Lucknow gharana often showcase dynamic variations in intensity, volume, and articulation. Tabla players employ a range of strokes and techniques to create contrast and variation within the composition, alternating between softer and louder passages, faster and slower tempos, and subtle nuances in tone and timbre.

In terms of improvisation, tabla players in the Lucknow gharana are encouraged to explore improvised variations, elaborations, and embellishments within the framework of the composition itself, adding their personal touch and artistic interpretation to the music. This improvisational approach brings spontaneity, dynamism, and individuality to tabla performances, keeping the tradition vibrant and evolving. This distinctive aspect is contrasted with other gharanas, where a structured section is reserved for performance. The tabla player adheres to this structure, improvising according to established canons, i.e., *paltas*.

In conclusion, the Lucknow gharana is one of India's pivotal musical traditions. It is characterized by profound emotional sensitivity, exceptional technique, and a vibrant musical heritage that inspires and shapes musicians globally (Kippen, 1988).

Nevertheless, I will start with its language to delve deeper into the musical instrument.

The language and, therefore, the vocabulary of the tabla is composed of *Bols*⁷⁴, i.e., syllables corresponding to specific strokes on the tabla drums.

The bol system is essential to the tabla and serves multiple purposes. Each *bol* represents a particular sound produced by striking the tabla in different ways, both on the *bayan* and the *dayan*.

Indeed, tabla players vocalize and recite the bols and rhythms (*padhant*), which serve as both a teaching method and a performance art.

Bols serve both practical and expressive functions, forming the core vocabulary of tabla playing while also reflecting the instrument's rich musicality. They are not merely mnemonic aids, but performative

⁷⁴ Bol comes from the Hindi word "bolna, meaning "to speak." Those who learn the art of tabla are taught to recite what they will play.

syllables that guide articulation, technique, and improvisation. Bols appear across various compositional forms, including *Theka* (basic rhythmic patterns), *Peshkar* (initial improvisations), *Kaida* (theme and variation), *Rela* (fast, rolling compositions), *Gat* (fixed or semi-fixed compositions), and *Tukra* (short, fixed cadential phrases). Each of these compositional types employs bols in distinct ways to shape texture, phrasing, and rhythmic development. The sounds produced follow an onomatopoeic language associated with the instrument itself, mostly linked to poetry and Hindi poems. (Hopkin, 2003)

This vocalized system—frequently learned orally before instrumental application—ensures the internalization of rhythm and technique.

Bols can be broadly categorized based on their sonic characteristics, particularly their resonance. Resonant (or open) syllables include NA, TA, DHA, TIN, DHIN, TUN, GHE, and GI, which create sustained tones and are often produced on the larger drum (bayan). In contrast, non-resonant (or closed) syllables, such as Ti, T', T'th, Ki, K'th, Dhit, and others, produce staccato sounds, usually articulated on the smaller drum (dayan). This dichotomy is essential in shaping the timbral complexity and expressive nuance of tabla performance.

Moreover, the articulation of bols is inseparable from tabla pedagogy. Students first learn to vocalize these syllables—known as bol-parhant—to develop an internal rhythmic sense before translating them onto the instrument. This vocal-to-manual transmission emphasizes the embodied nature of tabla learning, where language, memory, and movement are intricately interwoven.

Then, there are small words that are formed by joining two or three syllables, e.g., *Dhage*, *Dhinna*, *GiNa*, *Tinna*, *Dhagena*, *Tirakite*, etc. (Naimpalli, 2005:24, 123-139)

Additionally, a defining feature of the Bols is their classification based on sound, which includes resonant and non-resonant syllables. These syllables combine to form words and phrases. To create these sounds, fingers either bounce off the drum (open stroke) or dampen the stroke (closed)

Therefore, it can swiftly categorize these sounds based on the drums they originate from, considering that certain sounds are created by both drums and by blending sound qualities, such as combining open and closed sounds.

Bayan (low-pitched sound): Ge- Ga- Gi (open) Ke- Ki- Ka- Kat (dumped)

Dahina (high-pitched sound): Ta- Na- Ra- Tun- Tra (open) Ti- Tin- Re- Na-
Te (dumped)

Combination Strokes: Dha- Dhin- Dhir- Dhet- Kra- Kran

Understanding the tabla repertoire requires an in-depth analysis of the compositions, which follow specific rules while allowing for improvisation. I will address this later in the specific sections. However, the logical arrangement of these phrases makes a sentence, and thus, numerous compositions are created. These compositions fall into two main categories:

1. Extendable compositions
2. Non-extendable or Fixed compositions.

In the tabla repertoire, *Extendable* and *Non-extendable* compositions refer to two categories of rhythmic compositions that tabla players use during performances.

Extendable compositions, often referred to as *Gats* or *Gath*, are rhythmic pieces that provide a structure for improvisation and elaboration by the tabla player. These compositions typically consist of a fixed structure or theme followed by sections that allow for variations and embellishments. Tabla players can expand the basic rhythmic pattern of the composition through improvisation, introducing intricate rhythmic patterns, embellishments, and variations while still adhering to the underlying structure and theme. The extensible compositions serve as a platform to showcase the tabla player's creativity, technical prowess, and improvisational skills.

Extendable composition, e.g., *Kaida*, is a significant characteristic of Tabla's playing.

The *Kaida* exemplifies the concept of extensible composition, as its simplicity and clarity make it ideal for exploring the balance between pre-composed material and improvisation. For example, the tabla player begins the improvisation process with the pre-composed theme in a given tala. This typically includes a repeated phrase that serves as a point of

reference. Improvisation involves creating variations on this theme using techniques that maintain the main structure and periodically return to the original theme⁷⁵.

The extendable composition is the identity of Tabla, which is based on the *Khali-Bhari*⁷⁶ principle. These are set compositions that are to be improvised by making permutations and combinations of various phrases in the central theme of the composition. These compositions are expanded by playing different patterns/Paltas⁷⁷ systematically and in order. According to Kippen, Kaidas exemplifies how tabla playing is both an intellectual and a creative exercise in which the player demonstrates technical mastery while expressing musical ideas through improvisation (Kippen, 1988:102).

Improvisation is central to tabla playing, linking the instrument to broader Indian classical traditions, in which improvisation serves as both a personal expression and a display of virtuosity. In his studies of Hindustani music, Martin Clayton has emphasized the improvisatory nature of Indian classical music as a fundamental characteristic that distinguishes it from the more fixed compositions of Western classical music (Clayton, 2000:67). Clayton's research on rhythmic improvisation highlights how tabla players manipulate time and rhythm within the structure of the tala, creating tension and release through the expansion and contraction of beats.

Nevertheless, improvisation is either pre-planned or spontaneous. In improvisation, the principle of *Farshbandi*⁷⁸ plays an important role. It means playing and improvising an extendable composition within one

⁷⁵ e.g., palta (pattern variations), rhythmic subdivisions, and dynamic modulations. These variations are constructed by manipulating the placement of strokes, introducing syncopations, or altering tonal emphases, allowing the performer to show creativity within the confines of tradition.

⁷⁶ The Khali-Bhari principle is a fundamental concept in the tabla repertoire that refers to the dynamic interplay between empty (khali) and full (bhari) beats within a rhythmic cycle (tala). This principle is essential for understanding the structure and expressiveness of tabla compositions and improvisations.

⁷⁷ Expansionary compositions such as kaydas or relas are improvised upon through the help of paltas. A Palta is a variation derived from the bols of the mukh or theme of the kayda or rela. Paltas help to show different combinations of a mukh using the bols of that mukh. Mathematically, we can develop a seemingly endless amount of permutations and combinations using a specific language, and the expansion process differs from player to player.

⁷⁸ Farshbandi is a specific term used in the context of playing tabla, particularly in the gharana of Lucknow. It refers to a type of rhythmic, fixed-structure, typically complex and ornate composition or pattern that showcases the tabla player's intricate and sophisticated techniques.

rhythmic cycle, equally divided into four parts. Peshkar, Kayda, Rela, etc., are improvised on the principle of *Farshbandi*.

For instance, *Kayda* always concludes with a *Tihai*, a phrase repeated three times consecutively, originating from its foundational phrases. Essentially, *Kayda* is freedom with limits.

Another extendable composition is *Rela*, a fast and intricate piece performed on the tabla, characterized by quick strokes. It allows for remarkable speed and fluid execution. A well-crafted rela weaves together complex rhythmic patterns, maintaining clarity and musicality at high speeds. *Rela's* improvisation is similar to *Kayda's*, as *Peshkar* and *Kayda* have phrases ending with vowels, while *Rela's* phrases end with a set of consonants.

On the other hand, non-extendable compositions are rhythmic compositions with a fixed structure and a sequence of bols that cannot be altered or extended during performance. These compositions, such as *laggi*⁷⁹, *tukra*, and *chakradar*, are generally learned and memorized in their entirety and are performed exactly as taught, without improvisation or variation. Non-extensible compositions often showcase complex rhythmic patterns and bol combinations, demanding precise execution and mastery of tabla techniques. While they may permit subtle interpretive nuances, these compositions are typically performed in line with their established structure, without significant deviations. Non-extensible compositions are self-contained in terms of grammatical and mathematical structure.

To summarize, extendable compositions offer a flexible framework for improvisation and elaboration, enabling tabla players to express their creativity and improvisational abilities. In contrast, non-extensible compositions follow a fixed framework and bol sequence, necessitating exact execution and a thorough understanding of tabla techniques. Both composition types are vital to the tabla repertoire, enhancing the richness and variety of Indian classical music performances.

The interaction between these two composition types illustrates the dynamic relationship between fixed and fluid elements in tabla performance, grounded by the cyclical rhythm of *Tala*. Grasping the tala is crucial for appreciating the subtleties of Indian classical music and

⁷⁹ *Laggi* is a short, repetitive compositions performed at high speeds, mostly in light-classical genres.

understanding how Indian musicians maneuver through intricate rhythmic patterns and improvise within defined cycles.

Taal (or *Tala*) is a term used in Indian classical music to refer to a temporal structure based on a rhythmic musical cycle. The framework of this cycle time is its repetitiveness; that is why it is a cycle.

Tala, the rhythmic framework in Indian classical music, is foundational to Hindustani and Carnatic traditions. It organizes time into cycles of beats, with specific divisions and accents, serving as a guiding structure for composition and improvisation. Each tala has a unique pattern of beats or *matras*, focusing on *Sam*, i.e., the first beat and significant points of emphasis, such as *Tali* and *Khali*.

All *taal* can be performed with various subdivisions, ranging from macro-rhythm to micro-rhythm, utilizing notes or syllables known as bols, which are the Indian musical notation identifying the sounds produced on the tabla.

To elaborate, macro rhythm involves the rhythmic framework of the taal, which dictates the overall flow and phrasing of the composition.

Micro rhythm, conversely, encompasses the detailed rhythmic subdivisions and embellishments within each beat or vibhag, including variations of bols and ornaments executed within the taal. This aspect underscores the performer's technical accuracy and interpretive finesse, often explored through improvisation within the parameters of the taal.

Consequently, macro and micro rhythms coexist and interact in a performance. A proficient musician remains attuned to the taal as a whole (macro rhythm) while navigating complex patterns and variations within each measure (*micro rhythm*).

The beauty of the tala lies in its dual nature: it serves as both a foundation and a means of expressing creativity. While the basic structure of a tala is fixed, how musicians interact with it is highly flexible and creative. Through the art of *laykari* (rhythmic manipulation or variation), musicians can play with the timing and phrasing of notes, creating intricate patterns and syncopations that add depth and excitement to the performance.

Another difference to consider is the *Sam*, *Tali*, and *Khali* concepts, which I introduced briefly. The relevance of these concepts is due to the fact

that in Western music, the agogic is predominant and establishes the flow of the music itself. In Indian music, instead, each section has its meaning and function.

These elements provide a framework that supports the intricate interplay of rhythmic patterns, enabling musicians to explore and express the rich rhythmic possibilities of Indian classical music.

Indeed, the *Sam* represents the climactic and first beat of each metric cycle; although it is counted as number one, it functions as the "finalist" of the cycle. In Hindustani classical music, the *Sam* plays a central and defining role within the rhythmic cycle. It is the first beat of the cycle and the point of resolution toward which all rhythmic and melodic phrases gravitate.

In Western music, especially in 4/4 meter, the rhythm emphasizes the first beat, creating a predictable structure (1-2-3-4) and establishing a sense of grounding. The first beat initiates the metrical cycle and serves as a point of resolution, lending it a cyclical quality reminiscent of *Sam*. However, Western rhythm tends to be more static.

In Hindustani music, the *Sam* transcends being a mere structural marker. Rather than considering it a definitive endpoint, it is better understood as the culmination of an evolving process, a point of emergence rather than resolution. Musicians carefully construct their rhythmic or melodic phrases to develop tension, complexity, or ornamentation, which gradually unfold in the Music, rather than arriving suddenly. (Stewart, 1974:79-80)

The other two complementary elements are *Tali* and *Khali*. To elaborate, in Indian music, the tempo is taken (counted) by handclapping. Thus, the elements of *Tali* and *Khali* have a strong and characteristic relationship.

Tali, the strong accent, is where the clap comes from. *Khali* is the place where the hand is waved. It comes at the beginning of the vibhag, i.e., the division.

Khali, the non-accentuated stroke, is signed by the hand wave, which counts the relative beats of the taal. Each Taal has a particular pattern and number of *Talis*, usually a thali.

Taal means clap; in playing tabla, the same is replaced by bols, but the player keeps track of it in mind. Taal itself is a metric by which the characteristics of a composition are defined. Hence, Thali is the place where a clap occurs. In every vibhag (division), the first matra is where

either a clap or a Khali is performed. So, a clap indicates Tali vibhags, while a wave indicates Khali vibhags.

Another concept worth mentioning briefly, which Clayton explains in his book (2008:75-76), is the *Lay's* one and the way Western musicians approach it. This is interesting because it shows the various ambiguities that may arise in this regard.

Lay, meaning time and rhythm, is one of the most essential rhythmic concepts in Indian music. Indian musicians refer to the ability to generate rhythmic variations while maintaining awareness of such and control of tempo. In the same field, this concept concerns Westerners as "rhythm and meter," which translates the Western idea of tempo, the perceived pulse rate of a piece of music. It may seem the same, but it is different from the two musical worlds on a perceptual level.

Academic literature has explored this knowledge, examining the crucial components, their roles, significance, and the rich tapestry they weave within the music.

Scholars like James Kippen and Martin Clayton offer comprehensive insights into the rhythmic structures and cultural significance of tala in Indian classical music.

James Kippen, an expert in tabla performance and teaching, investigates the historical evolution of tabla repertoire across various gharanas. His studies illuminate the stylistic variations and innovations that distinguish the different gharanas, thereby enhancing our appreciation of the tabla's tradition and heritage. Kippen's straightforward explanations demystify the intricacies of the tabla repertoire, which encompasses traditional pieces (such as Peshkar and Kaida) and improvised forms (like *Relas* and *Tukra*).

Clayton's (2008) book explores the complex rhythmic structures of North Indian classical music, offering insights into musicians' perceptions and navigation of intricate rhythmic patterns. His analysis enhances understanding of the cognitive processes involved in tabla performance and composition. Additionally, Clayton's work highlights the psychological mechanisms involved in perceiving and performing tala, revealing how tabla players internalize and express rhythmic structures in their performances.

In conclusion, this section explores the tabla's history, its extensive vocabulary of bol, and its improvisational techniques. It emphasizes both the historical background and pedagogical approaches, like the Gharanas, that have preserved and enhanced the rhythmic and improvisational aspects defining the tabla's role in Hindustani music. Additionally, it acknowledges the contributions of influential figures and scholars, including Kippen, Clayton, and Stewart.

By understanding the tabla's linguistic and improvisational characteristics, one can appreciate its significance not only in Indian classical music but also in modern global musical contexts, such as jazz, and how its intricate rhythmic patterns create opportunities for cross-cultural collaboration.

1.5 Drums language

In this section, I will explore the language of the drums, much like I did with the tabla. I will trace its history, highlighting crucial aspects that support the hybrid topic. This includes discussions on the languages and their formal codifications, the origins of the snare drum, and notable figures who, in my view, have revitalized this instrument, often seen merely as a timekeeper, into something with a new voice and purpose.

The history of the drumset is one of innovation and adaptation. Originating in the late 19th and early 20th centuries in North America, drums were initially various types of multi-percussion sets. Then they took on the setup we know today, played by a single player. It became the second most-used instrument after the piano. One proof of the popularity of this "new" instrument was that it began to have a name by which it was known. Therefore, instead of being designated as a simple multi-percussion set, this set of instruments became known as a *trap set* or *traps*. (Lopes 2019: 131-132, Glass, 2012a)

Early drummers adapted military and orchestral instruments to create a cohesive setup suited to emerging popular musical genres such as jazz⁸⁰. Over time, drummers developed new techniques and incorporated additional components, leading to the evolution of the modern drum kit.

⁸⁰ This moment in the history of the evolution of the drum can be considered the 'definitive' of the 'conventionality' of the instrument, thus allowing new technical and material possibilities, which also influenced some musical styles. An excellent example of this is the sound and rhythmic pattern that, for many, best personifies and identifies the swing style is precisely the so-called 'swing rhythm,' which is played with the hand on the crash cymbal, making the characteristic opening sound with the foot. (Lopes, 2019:135)

The essential functions of the drum kit include the accompaniment function, i.e., groove and ostinato, as well as the solo aspect.

There would be much to say about its history, but I will limit myself to summarizing it for practical purposes.

Nevertheless, through Lopes's article (2019:125-138), I would like to highlight the instrument's technical innovations and draw thematic parallels with the topics of my thesis, which concern not only the integration of traditional Indian rhythms into modern percussion practices but also a historical and technical perspective on the evolution of the drums.

Lopes delves into the evolution of drums and the development of unconventional techniques, with a particular focus on the use of brushes. He traces the history of the drum from its origins as a conventional percussion instrument to the adoption of innovative performance methods that have significantly expanded its expressive capabilities⁸¹. He highlights the centuries-old journey of the brush technique⁸², highlighting its impact on jazz and other musical genres (2019: 131-132).

The article explores how the brush⁸³ technique, initially developed as a quieter alternative to drumsticks, has become a vital expressive tool for drummers. Different languages, techniques, and musical writing characterize it.

Hence, this article helps me highlight unconventional techniques and their subsequent transformation, as well as historical and linguistic affirmation, precisely as seen in the adaptation of traditional Indian structures, such as *Kaida*, *Laggi*, and *Rela*, to jazz drums, which I will address in the subsequent chapters.

⁸¹ Throughout its evolution, the drums have always used unconventional objects and techniques, which were subsequently adapted and considered conventional. In reality, the drums, as the sum of their constituent parts, were born as unconventional instruments and, by becoming conventional, ended up acquiring the status of one of the most celebrated instruments today. (Lopes, 2019: 136-137)

⁸² In the case of drums, knowledge of the instrument's history of evolution and the constant refinement of its physical construction has led to the emergence of new musical techniques and effects, which, in a circular effect, integrate the aesthetics of the music into which the drums are present and, in turn, require new 'evolutions' to the 'conventions' previously defined for the drums.

⁸³ Brushes have a distinct technique from drumsticks. Throughout the history of drums, some drummers have become brush specialists, contributing to creating, developing, and establishing a brush drumming language.

Stealing the quote from the French biologist Antoine Lavoisier, contained in the article:

*Rien ne se perd, rien ne se crée, tout se transforme*⁸⁴.

Thus, hybrids and crossovers embody every domain. They illustrate that there are no incorrect paths; everything evolves, and nothing vanishes.

In this thesis, I illustrate how drummers and musicians continuously seek innovative ways to expand the expressive potential of their instruments. This exploration involves employing brushes, adopting new techniques, learning different musical languages, and embracing a shifted perspective on drumming that fosters the discovery of unique sounds, such as incorporating Indian rhythms into my work.

I will now briefly outline the history of the snare drum and its terminology, while emphasizing the differences—and some grammatical parallels—between the two percussion instruments discussed in this thesis, despite their foundation in different languages.

The primary language of drumming focuses solely on Rudiments, which represent the drum vocabulary. These Rudiments are a series of small models that serve as the foundation for more intricate and elaborate drumming techniques.

Rudiments are essential for drummers to develop their technique, phrasing, control, and coordination. Once they have a solid grasp of basic rhythms, drummers move on to more complex patterns, orchestration, and free improvisation on the drum set. The language of drumming is important from educational, cultural, and historical perspectives. This research will explore key themes, including sticking, sonority, and orchestration.

Thus, it is essential to emphasize the primary voice of the drum set: the snare drum.

The snare drum is a vital component of the drum kit, showcasing both technical complexity and expressive capability. Its dynamic and tonal qualities enhance its function as a prominent voice in traditional and modern music. A key feature is the snare wires positioned over the bottom head, which create a sharp and clear sound, facilitating a broad dynamic range from soft ghost notes to powerful strokes.

⁸⁴ *Elementary Treatise of Chemistry*, 1789.

This tonal and dynamic versatility suits the snare drum for cross-cultural rhythmic exploration. John Riley (1994: 45) observes that:

Through its dynamic capabilities and articulated response, the snare drum can capture the soul of a rhythmic idea, highlighting its role as the rhythmic and emotional anchor of the drum kit.

For this reason, it is a versatile and expressive percussion instrument. Its reactivity and sensitivity allow it to respond audibly to the softest strokes, even with a wire brush.

The snare drum⁸⁵ comes in various sizes and materials and can be played in different ways, such as with drumsticks, brushes, and mallets, producing unique sounds. It has a rich history, evolving from a tool for signaling in battles to a key component in orchestras, marching bands, jazz, and modern pop music.

Over time and across various eras, the snare drum has evolved in terms of shape, materials, and playing techniques. Mastery of basic drumming techniques was essential for many of these military pieces, making snare drum players the sole musicians capable of performing the service pieces at the military camp. (Moeller, 1956:10)

Therefore, the drum's rudiments have evolved in tandem with the snare drum; Swiss fife and drum groups are sometimes credited with their invention. The first written rudiment was written in Basel, Switzerland, in 1610. Rudiments with names known today, e.g., the single paradiddle, the flam, the drag, the ratamacue, and the double stroke roll, are listed in the book *A New, Useful and Complete System of Drum Beating* by Charles Ashworth in 1812. This book lists 28 drum rudiments, similar to today, especially all the rolls that start with the left hand.

Subsequently, other books⁸⁶ were published regarding the snare drum and the fife, or the drum and the trumpet. In the 19th century, drum rudiments seemed well-established.

⁸⁵ The snare drum's roots extend to ancient civilizations such as Egypt, Greece, and Rome, which employed simpler variants for military and ceremonial purposes. This instrument developed from the medieval tabor, a drum characterized by a single gut snare across its bottom. It was slightly larger than an ordinary tom and initially used in warfare.

⁸⁶ <https://www.alaincharmoille.com/drum-book-history/>

In this regard, the rudiments of Scottish drumming began in the 16th and 17th centuries. Competitive practices among pipe bands in the 19th and 20th centuries formalized these rudiments, leading to the development of complex drum notation. Scottish rudiments have had a significant influence on global drumming traditions, demonstrating technical discipline and musical cohesion. Unlike generic systems like N.A.R.D., they mainly accompany bagpipes in pipe bands with precise rhythms. Designed to sync with traditional melodies, they feature *flams* and *drags* that enhance musical flow and solidify the drums' role. Tightly controlled *buzz rolls* accompany the bagpipes, adding essential rhythmic texture.

In contrast, the National Association of Rudimental Drummers⁸⁷ (N.A.R.D.) was established in 1933 by a collective of nominated drummers who identified thirteen standard American drum rudiments as criteria for membership. They aimed to assess the basics that arose in Switzerland 200 years ago when musical notation was not standardized.

The thirteen organizers aimed to standardize a drumming system by selecting essential rudiments for evaluating all corps and drummers. They chose the *Thirteen Essential Rudiments* from the 26 standard American drum rudiments for membership in the association. In 1984, the *Percussive Arts Society* added 14 more rudiments, resulting in the 40 International Snare Drum Rudiments.

All of the rudiments can be traced back to one of 4 *families*: Roll⁸⁸, Diddle⁸⁹, Flam⁹⁰, and Drag⁹¹ rudiment.

The N.A.R.D. rudiments list was part of a more considerable effort to standardize drumming pedagogy. It is rooted in the American military drumming tradition, which has historical ties to European styles, including Scottish. While derived from a military tradition, these rudiments are primarily geared toward concert and marching band settings. Over time,

⁸⁷ There are thirteen essential rudiments of the National Association of Rudimental Drummers. Another 13 rudiments have been added to arrive at 26 standard American drum rudiments for completeness.

⁸⁸ Roll means playing evenly-spaced notes. These notes may be single strokes (alternating from hand to hand), double strokes (two strokes in each hand), or multiple strokes (three or more strokes in each hand).

⁸⁹ A diddle is drumming language that involves a combination of single and double strokes in a repeating sequence.

⁹⁰ One grace note followed by a full volume stroke played very close together in order to sound like one slightly longer note.

⁹¹ Two grace notes are followed by a full-volume stroke, which gives the impression of a "dragged" sound, hence the name.

they have evolved into a universal standard for drumming education, forming the basis for the modern drumming techniques we know and study today.

Drum rudiments fascinate drummers, allowing them to adapt patterns creatively and develop a personal language of sound, phrasing, and sticking. For instance, with rapid stick bounces, the *buzz roll* creates a continuous buzz due to the drum's taut head and responsive snare wires. In contrast, the open roll emphasizes precision, articulating each hit clearly. Again, the *flam*, an embellishment note followed by a lead hit, adds immediacy and accentuates the lead note. In contrast, the *drag* builds anticipation with two embellishment notes before a lead hit.

As the snare drum evolved into the modern drum kit⁹², drummers expanded their role in bands, going beyond simple timekeeping to adding color and texture⁹³.

Regarding jazz music, drummers like Buddy Rich and Gene Krupa⁹⁴ have developed basic rudiments in expressive solos, just as a tabla player might create a *Kaida* in dynamic improvisation.

They are pillars of jazz drumming, but other extraordinary drummers also shaped the evolution of this instrument. Rich, one of the greatest, was renowned for his technical precision, speed, and musicality on the snare drum, setting new standards.

His exceptional timing and control of rudiments, such as single strokes and double rolls, enabled him to execute complex rhythms and deliver intricate fills that captivated both audiences and fellow musicians. Rich's snare drum technique featured dynamic contrast, showcasing his ability to adjust the volume from powerful crescendos to soft ghost notes, which enhanced the expressiveness of his playing and conveyed a range of emotions. He viewed the snare drum as a percussion instrument and a melodic voice. His improvisations featured melodic motifs, rhythmic variations, and expressive flourishes, highlighting his creativity and imagination.

⁹² With the drum kit's development and the pedal's introduction, the number of drum teachers increased, leading to what became known as the double drum kit, which used a third limb. (Mowitt, 2002:80)

⁹³ In the 1930s, with tom-toms, bass drums, and cymbals, drummers could incorporate a range of sounds, ultimately transforming the snare drum into part of a larger, more expressive instrument.

⁹⁴ Eugene Bertram Krupa (January 15, 1909 – October 16, 1973) was an American jazz drummer, bandleader and composer.

Gene Krupa, on the other hand, is a pioneering figure in jazz drumming, revolutionizing the snare drum with his skill and musical innovation. His blend of technical virtuosity, speed, agility, and rhythmic creativity defined his approach, e.g., applying accents and dynamics to create surprising contrasts on the snare drum.

Gene Krupa, often credited with shaping the role of the drum kit in jazz, once said:

The bass drum and cymbal are the drummer's lifeline to the audience.

(Modern Drummer magazine (Oct./Nov. 1979))

This statement marks a pivotal moment in drumming history, underscoring the drums' increasing significance in music. It identifies the bass drum and cymbal as essential for creating rhythm and engaging the audience. Krupa's focus on these instruments marks the drums' evolution into a dynamic medium conveying performance energy, especially in jazz. In conclusion, the two drummers' technique serves the music, enhancing rather than overshadowing the melody and other musicians. This showcases the rudiments' versatility, as a single fragment can produce varied rhythmic and melodic solutions through technique and drum orchestration.

In this section, I investigate the history of the snare drum, its terminology, orchestration, versatility within the drum kit, and its relationship to the tabla. While there's significantly more to explore regarding contemporary drumming from the perspectives of evolution and crossover, I aim to present a foundational overview consistent with my thesis work. This section is designed to compare Western drumming techniques with the language of the tabla, establishing a basis for my examination of rhythmic hybridization.

In the upcoming chapters, I will draw upon my drumming influences and analyze their contributions to enrich my thesis discussion. By examining how drummers such as Dan Weiss and Bernhard Schimpelsberger incorporate tabla language and compositions into their performances, I will highlight their technical prowess, expressive capabilities, and crossover elements. This investigation is crucial to my thesis, as it highlights the evolution of drums as an art form and underscores their distinctiveness and versatility as an instrument. Additionally, it is essential

to highlight the importance of intercultural understanding and how musicians from diverse traditions can learn from and inspire one another.

At this juncture in the narrative, I wish to take a moment to discuss the connection between the two languages, Tabla and Drums. My choice to address them stems not only from my obligation and the need to document but also because I recognize that both are rhythmic, easily imitated, and have a relatively accessible common ground.

Examining drum rudiments alongside tabla language reveals intriguing insights into two distinct yet functionally similar teaching methods. Both disciplines prioritize the mastery of essential strokes and their combinations as a foundation for further progress, although their approaches and philosophies differ significantly.

In the context of tabla, the learning journey commences with the memorization and practice of the bol. The emphasis lies not only on memorizing strokes but also on cultivating a deep connection between the sound, its linguistic form, and its rhythmic positioning within the cyclical nature of the taal. This fusion of sound and language establishes a unique educational framework, where students absorb the rhythm as an oral tradition before expressing it on their instruments. (Kippen, 1988:72)

In Western drumming, the concept of rudiments serves a similar fundamental purpose but is approached differently. These drum rudiments are designed to train muscle memory, coordination, and rhythmic precision. Unlike tabla bols, rudiments are abstract rhythmic patterns that can be applied in various musical contexts. For example, the paradiddle (Rlrr Lrll)⁹⁵ is a fundamental rudiment that trains drummers to seamlessly transition from one hand stroke to another, developing fluency and independence. Unlike tabla bols, which are tied to specific sonic outcomes, rudiments are abstract and can be applied in various musical contexts, from orchestral percussion to drumming. (Goldenberg, 1955:4-6)

A key distinction relates to the teaching focus. Still, there are similarities in how these fundamental components are creatively utilized. For instance, tabla players and drummers must interpret and improvise based

⁹⁵ The capital letter indicates that the note should be accented. Lowercase letters, on the other hand, should be played at a lower volume.

on their rudiments or bols, transforming technical drills into lively musical performances.

The tabla is notable for its onomatopoeic and cyclical language, which is distinctly different from the more straightforward rhythmic character of Western percussion instruments, such as the snare drum. In the tabla, rhythm is deeply intertwined with the phonetic quality of its syllables. For example, the three-syllable phrase *Takita* embodies a triplet rhythm due to its structure within the taal, and each syllable (*Ta- Ki- ta*) corresponds to a specific sound (in this case, two sounds, namely, *Ta* and *Ki*).

In contrast, the snare drum prioritizes rhythm as an independent element. Attention is placed on the rhythm, specifically the triplet, rather than the sound of each note.

To delve deeper from a drummer's perspective, I will provide some further concrete examples. Starting from the rudiments of drums, the use of *close rolls*, given their sound texture described previously, is close to the resonant and sustained tones of the tabla, such as those produced by the *Na Dhin Dhin Na* pattern, at speed, which seems precisely a *buzz roll*. *Open rolls*, on the other hand, are defined by cohesive strokes that mirror the tabla syllables.

In terms of embellishments, *flams* are very similar to the tabla *Dha bol*, where the right-hand resonance is complemented by the left-hand support, while drags can be reminiscent of tabla preparatory strokes that lead to pronounced notes.

I believe this comparison demonstrates how the cultural and philosophical backgrounds of each tradition shape their approaches to teaching rhythm and technique. While tabla fosters a comprehensive understanding of rhythm as both a linguistic and cyclical concept, Western drumming emphasizes technical flexibility and adaptability. Both approaches offer valuable insights into the universal pursuit of rhythmic excellence, and acknowledging these similarities and differences deepens our understanding of their distinct contributions to global musical traditions.

1.6 Introduction to the Critical Reviews

In this section, I provide a critical review of four influential musicians: Dan Weiss, Bernhard Schimpelsberger, Attila Gyárfás, and Trilok Gurtu. My focus will be on their performances, teaching methods, and contributions relevant to this thesis. Each musician represents a distinct fusion of Indian rhythmic traditions and contemporary percussion, offering insightful viewpoints on the adaptation of tabla language and rhythmic patterns for drumming.

I will evaluate each musician individually, underscoring their techniques, performances, and approaches to identify elements that I can incorporate into my thesis. This analysis will also help distinguish which aspects are less pertinent to my objectives.

Below is a summary of the aim and scope of this analysis.

Dan Weiss is crucial for this thesis and stands out for his deep immersion in Hindustani rhythmic concepts and their integration into jazz drumming. His meticulous study of tabla compositions and their adaptation to drumming provides a compelling example of rhythmic translation between instruments. For this thesis, I aim to critically engage with Weiss's use of *kaidas*, *tihais*, and compositional forms, analyzing which aspects of his method can serve as a foundation for my explorations. However, I also want to consider where Weiss's adaptations might diverge from the traditional essence of Indian rhythms, thus helping to define the boundaries of my approach, although I think Weiss maintains the concept of *Authenticity* mentioned above, demonstrating respect for the tradition of Indian classical music while pushing its limits within the language of the drum.

Bernhard Schimpelsberger offers a collaborative and experimental viewpoint by merging Indian rhythmic elements with Western musical frameworks in his compositions, mainly through his mathematical interpretation of *tihais*, which will be the focus of my analysis. His perspective on rhythmic cadence presents a valuable model for the rhythmic development of my work. Thus, I intend to explore how I can effectively use his accessible methods while assessing which aspects of his approach align with the requirements of jazz performance.

Attila Gyárfás offers another fascinating perspective, particularly in his focus on rhythmic improvisation and interactive performance. His phrasing, influenced by the *tihai* concept on drums, underscores the

dynamic potential of adapting Indian rhythmic structures within contemporary settings. I plan to investigate his techniques for preserving the essence of tabla patterns in improvisational scenarios, pinpointing strategies that could enhance the flexibility of such cadences in jazz.

Finally, Trilok Gurtu plays a pivotal role in this critical review, blending technical skills with cultural innovation. His innovative performances apply tabla techniques directly on a hybrid drum set, pushing the limits of traditional percussion. By examining Gurtu's seamless integration of Indian classical music and jazz, I aim to gain essential insights into the interplay between rhythmic and tonal elements. While his methods are highly inspiring, I aim to evaluate which facets of his artistry align with the broader objectives of this thesis and which may be less relevant to my focus.

In conducting these evaluations, I aim to identify techniques and concepts to integrate and determine what to omit, whether due to their impracticality in a jazz context or their divergence from the thesis's focus on rhythmic authenticity and flexibility. By engaging thoughtfully with these musicians, I aim to refine my approach, enhance my creative vision, and make a significant contribution to the ongoing dialogue between the languages of tabla and drum set in jazz.

Dan Weiss

Dan Weiss, an acclaimed American drummer and composer, is renowned for seamlessly integrating Indian classical music, particularly tabla rhythms, into Western drumming. Over the course of two decades, his study under Pandit Samir Chatterjee, a tabla master, profoundly influenced his rhythmic understanding, enabling him to incorporate complex tala cycles and bols into his drumming. He subsequently continued his studies at the Manhattan School of Music, where he studied jazz percussion with John Riley and specialized in classical composition. Weiss's musical career showcases his versatility and innovation as a composer and performer.

Weiss's work, recordings, performances, and teaching materials are highly relevant to tabla-drum set adaptations, intersections of jazz and Indian music, and the innovative use of rhythmic cycles in modern jazz.

Weiss explores the intricate rhythmic concepts of Indian music and translates them to the drum set, often using tabla compositions like *Kaida* and *Tihai*. His instructional videos and performances break down these complex rhythmic structures, showing how to count and play them on drums with articulation similar to that of the tabla. This approach allows drummers to integrate these rich, rhythmic elements into contemporary drumming practices.

Weiss's albums, such as *Fourteen and Sixteen: Drummers Suite*, showcase this innovative fusion, blending the improvisational qualities of jazz with the complex cycles of Indian music. These works highlight his ability to navigate cross-cultural rhythmic intersections, making Weiss a pivotal figure in contemporary jazz and the fusion of cross-cultural musical styles. The compositions often feature tihai phrasing within jazz solos, which display a sophisticated merging of traditions and an expansion of rhythmic vocabulary in Western drumming.

I selected Dan Weiss as a reference for my thesis due to his role as a prime example of how traditional Indian music can be reimaged within a Western context. His work offers tangible illustrations of how tabla rhythms can be effectively incorporated into drumming, highlighting the potential for cross-cultural musical fusion.

An essential element of Weiss's adaptation is his focus on the articulation and texture of tabla characteristics. Tabla playing encompasses a variety of sounds produced through different finger and palm techniques. Weiss emulates these sounds on the drums by employing diverse stick methods, hand percussion, and different striking areas across the drum heads and cymbals.

For example, the resonant sound of the "Na" hit on the Tabla, produced by striking the edge of the right-hand drum (dayan) with the index finger, can be imitated on the rimshot. Similarly, the low "Ghe" sound of the left-hand drum (bayan) can be played by striking the snare drum with the palm or using a mallet.

In his playing and adapting the language of the tabla to the drums, Weiss vocalizes the bols and translates them into corresponding sounds and movements on the drums, ensuring that their rhythmic integrity and expressive character are preserved. He then maps the sounds and bols to the drums, selecting components to mimic the tonal palette of the tabla.

Not only that, he replicates the micro-dynamics of tabla playing on the drums and uses subtle changes in the speed and angle of the sticks to emulate the tonal shifts of the tabla. For example, in his Jhaptal Drumset Solo, Weiss manipulates the cymbals and snares to replicate the tabla's fluid transitions between resonant and dampened strokes.

Dan Weiss integrates key elements of Indian classical music, featuring a shift from slow, thoughtful segments to rapid, complex sections. This journey usually begins with a Peshkar in tabla performances and progressively increases in both complexity and tempo. Through his drum solos, Weiss represents this evolution, crafting a narrative arc that mirrors the traditional tabla structure.

Weiss distinguishes himself with his profound cultural insight. He adapts tabla rhythms into his drumming while honoring the rich traditions of Indian music. His interpretations enhance both jazz and Indian classical genres, fostering significant cross-cultural dialogue. Instead of merely imitating or appropriating, he forges connections between these musical realms, expanding the rhythmic possibilities of the drums.

I wish to concentrate more on his contributions, as he inspires me personally and represents the most thorough Western viewpoint compared to others. I plan to quote and analyze four crucial videos that are essential for understanding crossover and musical hybridization in all its aspects, both auditory and instrumental.

I begin with his performance at the *Shastra Festival* in New York (2015), where he maps the tabla bols onto the drums.

This performance demonstrates his ability to map the language of the bols onto the drums, maintaining the traditional integrity of North Indian tabla phrasing while pushing the limits of what Western drumming can express. The tabla language is clear and unmistakable during his performance when he employs distinct compositions, e.g., kaida, and develops a theme through variations and complex tihai patterns. Also, as in the Indian tradition, before the performance, he sings the composition that he will play on the drums, as tabla players do with the tabla.

Weiss's creative method compares each drum element to a unique voice, reflecting the components of a tabla. By combining hi-hat and tom hits, he captures the complex tonal variations typical of tabla playing. This approach highlights rhythmic complexity and reconceptualizes drumming

in a tabla-inspired fashion, with each part fulfilling a distinct tonal function.

His performance showcases both his artistic and intellectual skills, especially his command of rhythm and polyrhythmic patterns. Therefore, I believe his technique demonstrates how Western drummers can incorporate tabla methods into their practice while gaining an appreciation for the subtleties and structures of Indian rhythm.

At first, his drumming appears to emulate jazz comping across all of Weiss's performances. Yet, upon closer inspection, one can discern unique phrasing and tonal choices that adhere to a different rhythmic framework. He prioritizes conversational phrasing, echoing the dialogue-centric style of the tabla instead of traditional drumset patterns. Each component of the drum kit expresses its voice, functioning independently yet cohesively to propel the composition forward. This technique cultivates a complex, "nervous" energy, where each sound contributes significantly to an engaging, dynamic structure, emphasizing a rhythmic interplay that transcends typical drum kit applications.

Furthermore, it's fascinating how he enhances specific phrases, starting with eighth notes, then progressing to triplets, and ultimately advancing to sixteenth notes to refresh the performance.

Moving forward with the analysis, I will examine his performance in Rasarang Resolution (2017), a duo with Jonathan Kay, a soprano saxophone player⁹⁶.

In this project, Dan Weiss plays a hybrid tabla/drum set that combines the tabla with an extra dahina. A 16" floor tom is used as a bass drum, hi-hat, ride, and snare drum for the drums.

The piece is divided into two parts:

Part 1: Rasarang - a contemporary Raga creation (J.Kay)

Part 2: Resolution (J. Coltrane)

This captivating piece opens with an extensive introduction featuring the Raga, which Kay performs alongside the background Tanpura. After three minutes, Weiss joins in with the tabla, enriching the performance with rich

⁹⁶ 20-minute song, Presented by Brooklyn Raga Massive Live at Art Cafe, Brooklyn, NYC - August 9th, 2017

colors and references to teentaal, while incorporating Indian rhythmic elements, such as the *Tihai* and phrases inspired by the tabla. Playing in a traditional tabla style, Weiss positions his knee on the bass drum pedal, allowing his foot to rest on the hi-hat pedal as he performs. Therefore, in this initial segment, the essence of a distinct crossover becomes evident.

Around ten minutes in, the climax intensifies; the drummer uses his left hand on the snare drum while his right strikes the tabla with greater emphasis, echoing the laggi style. He generates cadences on the hi-hat and snare with his left hand, facilitating a smooth transition to the next piece, "Resolution" by John Coltrane. Weiss then transitions to a swing rhythm, setting aside the tabla but maintaining intricate rhythmic cycles typical of tabla playing, including various examples of tihai, seamlessly integrating these Indian elements into his drumming. The tihai culminates on the rhythmic downbeat, showcasing how Indian rhythmic traditions can blend harmoniously with jazz improvisation. The piece concludes with a fade-out as Weiss gradually shifts away from jazz and returns to the tabla.

This video is essential for my thesis, especially for Western drummers. It illustrates how the tabla's drumming style may appear "strange" or unusual to those unfamiliar with it or who don't recognize its potential for crossover.

Musicians skilled in the rhythmic complexities of jazz, including bebop, may find it challenging to adapt to this approach, as it differs from their experiences with the interplay and comping typical of a conventional drum kit.

The drummer's unique language stems from a profound understanding of tabla traditions and styles, with each component of the drum kit resonating like a "voice," much like the high and low drums of the tabla produce their distinct sounds.

The cross-cultural fusion of Indian and jazz drumming traditions is evident. Furthermore, his use of the teental (16-beat cycle) in the video could illustrate the practical application of Hindustani rhythmic principles in a modern Western framework, providing concrete examples for your section on rhythmic hybridization.

This video holds significant value for me as I embark on my practical journey, serving as inspiration for a new vision of a crossover that encompasses both rhythmic and instrumental concepts, pushing the

boundaries of what musicians can explore. It emphasizes how tabla concepts can enhance a drummer's vocabulary, both rhythmically and methodologically. Additionally, I noticed an intriguing aspect of the use of dynamics in tabla performances, closely associated with the complex rhythmic and tonal variations of the instrument. Tabla players can manage the volume effectively and select the appropriate sound for their performance. The use of rhythmic accents and dynamics, especially in improvised sections like *Kaida* or *Rela*, allows players to create tension and resolution, reflecting the natural narrative arc found in Hindustani music. Therefore, approaching jazz drumming with these insights and incorporating this unique Indian influence will be fascinating, as it presents the challenge of balancing authenticity and coherence within such hybrid styles.

Tintal Drumset Solo's transcription

Next, I would like to explore two additional examples, starting with "The Tintal Drumset Solo Transcription." Dan Weiss interprets the tabla bol into drumming techniques, performing this piece for just over 17 minutes, beginning with a solo rendition of the teentaal on the drums.

In keeping with the tradition of solo tabla performance, this solo is composed of a precise hierarchical structure typical of a tabla solo. For this analysis, I will focus on selected passages, particularly relevant to my thesis, to understand how tabla phrasing is adapted to the drum set. Below, I present an encoding of the Teentaal groove and two representative compositions structured within the same tala cycle: a *Kaida* and a *Laggi*.

The first transcription (Fig. 1) illustrates how the Teentaal groove has been mapped onto the drum set. In particular, this adaptation prioritizes rhythmic integrity over the direct phonetic correspondence of tabla syllables (bols). Indeed, Dha and Ta, which traditionally denote distinct timbral qualities in tabla performance, are interpreted using equivalent drum orchestration rather than preserving their original phonemic articulation. This transformation is essential to bridge the tabla's idiomatic nature with the mechanics of Western percussion instruments.

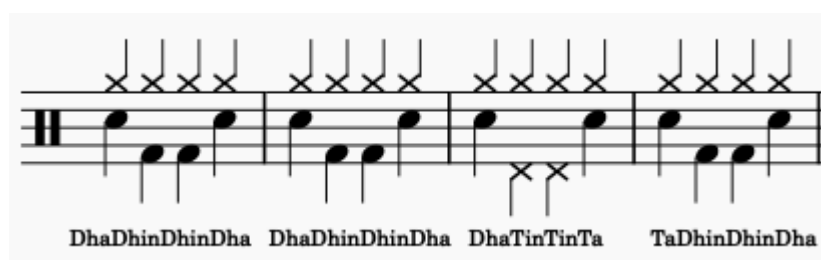


Fig. 1 - Teentaal groove on drums

The transcription of the Kaida adheres to the typical compositional structure of this form: a theme that serves as the foundation for subsequent variations. The rhythmic pattern preserves the systematic doubling and subdivision techniques characteristic of the development of the kaida, demonstrating the interplay between fixed structure and improvisational elaboration. The left and right-hand strokes are distributed across the drums to imitate the bayan (bass drum resonance) and the dayan (high-pitched articulation), maintaining the cyclical integrity of the tala while broadening the percussive palette.

In the transcription, the Khuli⁹⁷ (open) phrases are constructed with precise strokes, such as Dha, Ghe, and Na, structured to emphasize repetition and development.

The coordination between the left and right hands observed in the transcription indicates a specific adaptation for drumming. While the hand assignments diverge somewhat from traditional tabla fingering, they are modified for use with drumsticks. As a result, the transcription displays a fluid, rhythmic, and melodic continuity.

The series of variations brings forth a more complex phrase that preserves the foundational structure of the tala cycle. In this context, the bols illustrate the increasing rhythmic density.

The use of triplets on the second page (Fig. 2) intensifies the rhythmic movement, providing a sense of acceleration while remaining within the temporal cycle.

⁹⁷ This refers to the resonance of the bayan. The khuli section of the composition is the resonant or open section. The mudi is the non-resonant or closed section.

Khuli:



dha dha ghe ghe na ga dhi ne dhi na ghe ghe na ga
 te te ka ghe na ga dhi ne na ga dhi ne dhi na ghe ne
 dha ge te te ghe ghe na ga dhi ne dhi na ghe ghe na ga
 te te ka ghe na ga dhi ne na ga dhi ne dhi na ghe ne

Mudi:



ta ta ke ke na ka ti ne ti na ke ke na ka
 te te ka ke na ka ti ne na ka ti ne ti na ke ne
 ta ka te te ke ke na ka ti ne ti na ke ke na ka
 te te ka ghe na ga dhi ne na ga dhi ne dhi na ghe ne

The musical score for 'Khuli' consists of eight staves of music. Each staff contains a single melodic line written on a five-line staff. The notes are primarily eighth and sixteenth notes, often grouped in triplets. Above the notes, there are rhythmic markings: 'L' for left hand and 'R' for right hand, with a '3' indicating a triplet. The lyrics are written below the notes, aligned with the syllables. The lyrics are: dha dha ghe ghe na ga dhi ne dhi na ghe ghe na ga te te ka ghe na ga dhi ne na ga dhi ne dhi na ghe ne dha ga te te ghe ghe na ga dhi ne dhi na ghe ghe na ga te te ka ghe na ga dhi ne na ga dhi ne dhi na ghe ne ta ta ke ke na ka ti ne ti na ke ke na ka ti ne na ka ti ne ti na ke ne ta ka te te ke ke na ka ti ne ti na ke ke na ka te te ka ghe na ga dhi ne na ga dhi ne dhi na ghe ne dha dha ghe ghe na ga dhi ne dhi na ghe ghe na ga te te ka ghe na ga dhi ne dhi na ghe ne dha ge te te ghe ghe na ga dhi ne dhi na ghe ghe na ga te te ka ghe na ga dhi ne na ga dhi ne dhi na ghe ne

Fig. 2- Khuli

The following transcription of the *Laggi* (Fig.3) represents a faster, more ornamental section of the performance, providing a continuous, driving groove. Here, the adaptation of the drum set emphasizes rapid,

alternating strokes that mirror the resonant flourishes of the bayan and the crisp, high-pitched articulations of the dayan. The result is a vigorous rhythmic texture that remains anchored in the Teentaal structure while fully utilizing the timbral possibilities of the drum set.

The sticking pattern, indicated as a guideline, suggests a symmetrical performance. It can commence either with the right hand, maintaining the classic sticking RLRL, or with the left hand LRLR, thus aligning with Western drumming techniques used quickly on ride cymbal patterns or hi-hat ostinatos.

Variations in the placement of the bol, such as the alternation between Dha Ti Ghe Na and Ta Ti Ke Na (Thali and Khali, respectively), create a layered effect, making the groove dynamic rather than repetitive.



Fig.3 - Laggi

Weiss insightfully examines the relationship between grammar and sound in drumming. While tabla grammar effectively translates to drums, as shown in Dan Weiss's work, the sounds can be modified. His adaptation of tabla compositions for drums demonstrates that the rhythmic grammar remains unchanged, even with tonal alterations. Through meticulous articulation on the snare, bass drum, hi-hat, and cymbals, he preserves the tabla's rhythmic core while introducing new textures.

This distinction between grammar, which is the structure of rhythm and sound, and its expressive form is central to my research. My thesis aims to integrate this grammatical framework into my drumming practice, exploring how drums can echo and reinterpret various tabla sounds.

Therefore, this video highlights the educational value of integrating transcription with practice. It highlights how musicians, especially drummers, can internalize and reinterpret different rhythmic systems, which is vital for this adaptation.

Additionally, through the analysis of this solo, I have found his right-hand technique particularly captivating, as it allows him to perform extended rhythmic sequences, such as sextuplet notes.

It involves a counterclockwise inward wrist movement, accompanied by a slight finger technique, as the note group is played quickly. This technique allows for rapid execution of strokes with finger movements, especially in the back fingers (ring and little fingers), in a controlled manner and with minimal effort, defined sound, and strokes. It could be described as a sort of hybrid *Moëller*⁹⁸ technique. These hybrid approaches cater to the needs of modern drumming styles, including electronic groove, fusion, and breakbeat-inspired genres.

For a concrete example, Weiss uses this technique to play a rhythmic group of 16th triplets with resolution on the *Sam* (so 7 notes in total) = TAKITE TAKITE TA for a triplet group and a group of four notes, e.g., TIRAKITE.

The final critical review covers Dan Weiss's Style and Analysis, conducted by Rich Stitzel, who interprets a Weiss fill. Weiss employs a polyrhythm in this performance to achieve rhythmic and metric modulation. These reviews require me to contemplate the concept and formulate a personal interpretation based on the examples. In this video, Stitzel transcribes and clarifies a fill utilized by Weiss that centers on a 5:4 polyrhythm.

Beginning with a 5/4 time signature, he shifts the accents every five strokes and orchestrates the pattern on the drums. The primary aspect is the use of cymbals, which serve as a guide and are played in a four-note group. The left hand consistently plays the 1, while the right-hand alternates cyclically between the 2nd, 3rd, and 4th sixteenth notes, pausing before restarting the loop. Consequently, the right hand executes a sequence of five notes. (Figs 4)

⁹⁸ The Moëller technique uses a whip-like motion to produce fluid and powerful strokes with minimal effort. The technique uses a sequence of upstrokes, downstrokes, and tapping strokes, allowing drummers to play accents and ghost notes seamlessly within a single beat cycle.

5:4

cymbal L.h.	1	2	3	4	5
Right hand	1	2nd	3rd	4th	-



Fig.4 - five over four

He proposed an exercise that includes a 5:4 polymetric relationship consisting of a set of four notes and a set of five notes. The rhythm outlined below demonstrates the exercise. (Fig.5)



Fig.5 -5:4 polymetric relationship

Here are the accents created by the right hand playing four accents in 5/4, emphasizing the exercise's metric relationship. While the groove can be notated in eighth notes, I will present it in sixteenth notes. (Fig.6)



Fig.6- accents 5:4

Then, by shifting the accent to the right cymbal and enhancing the pattern—specifically, by incorporating the hemiola (3:4) with the hi-hat played by the foot—we achieve a superimposed *double polyrhythm* that includes a 5:4 with the left hand and a 3:4 with the left foot. Remember that playing a 5:4 with the right hand on the ride and the left hand on the snare is also feasible. (Fig.7)

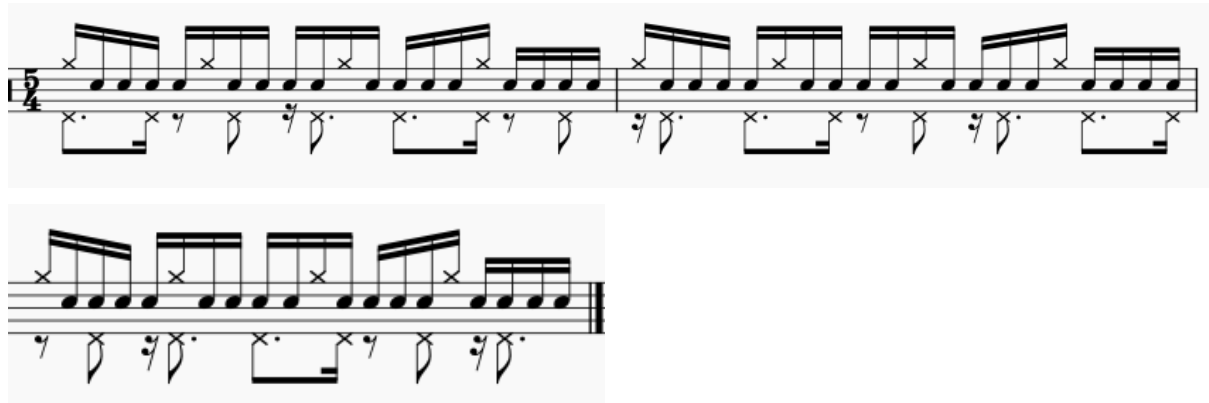


Fig.7 - 5:4 on drums

After achieving the previous step, we progress to a higher level of coordination, known as a 3:5 polymetric relationship. Here, the left and right hands work together, with the left hand playing the sixteenth notes on the snare and the right hand on the floor tom. The accents are struck on the ride cymbals every four sixteenth notes with the right hand, while the left-hand plays accents every five notes within the sixteenth notes sequence. (Fig.8)

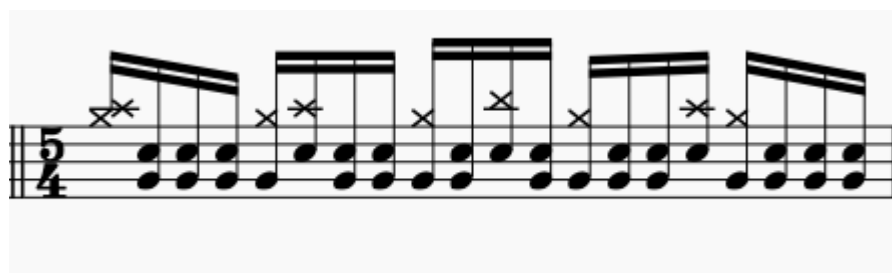


Fig.8 - 5:4 on drums

Bernhard Schimpelsberger: Tihais and beyond

Bernhard Schimpelsberger is a British-Austrian drummer and percussionist renowned for his distinctive fusion of Western and Indian classical music. Raised in Austria amid influences of jazz and Western classical music, his artistic path underwent a significant transformation after he studied under the tabla master Pandit Suresh Talwalkar. This mentorship deepened his understanding of Hindustani rhythmic systems, which he expertly integrates into his compositions.

Schimpelsberger's artistry bridges various musical traditions, combining the structured patterns of Indian rhythm with the innovation and flexibility of Western drumming. He has worked alongside globally recognized artists such as Anoushka Shankar, Nitin Sawhney, and Talvin Singh, as well as with orchestras and dance companies, including projects by Akram Khan.

Bernhard Schimpelsberger is known for integrating South Indian rhythms, *Konnakol*⁹⁹, into Western musical structures.

Konnakol, primarily associated with Carnatic music, serves as a foundation for rhythmic improvisation. It enables performers to explore and enhance fundamental patterns.

The syllables in konnakol are specific and standardized, including *Ta*, *Ka*, *Dhi*, *Mi*, *Ki*, *Na*, and others. These syllables are arranged in patterns corresponding to various tala cycles, ranging from simple to highly complex. They are related exclusively to the rhythm, not the sound, as in tabla bols.

Konnakol and tabla bols are distinct yet related rhythmic systems found in Indian classical music. Emerging from the Carnatic tradition, Konnakol serves as a versatile, vocalized rhythmic framework frequently utilized in both instrumental and vocal performances. In contrast, tabla bols comprise specific rhythmic phrases linked to the unique sounds of the tabla, which are crucial for executing precise strokes in Hindustani music. While Konnakol offers a broader vocal context, tabla bols present a vocabulary tailored to the instrument, making both indispensable for understanding the rhythmic traditions of Indian music.

⁹⁹ Konnakol is the art of vocalizing rhythmic syllables, mainly associated with Carnatic music. It involves reciting rhythmic syllable patterns (solkattu) that are used to convey complex rhythmic structures and cycles (tala).

Schimpelsberger's journey into the world of Indian rhythms began under the guidance of the eminent tabla master Pandit Suresh Talwalkar, who provided him with a deep understanding of Indian rhythmic systems and their intricate patterns.

This experience highlights his drumming abilities, particularly his talent for seamlessly blending complex Indian tala cycles with contemporary Western rhythms, creating a distinctive sound that respects and merges both musical traditions. He incorporates the richness of Indian rhythmic complexity into his jazz, classical, and experimental performances. This fusion is evident in his collaborations with various artists, as well as in projects such as *Circle of Sound* with Soumik Datta, where his proficiency in Indian rhythms enhances and elevates the overall musical piece.

In his instructional work, *Advanced Indian Rhythm Studies for Western Musicians: A Guide Through Secret Rhythm Calculations*, Schimpelsberger lays out a theoretical framework and practical exercises for understanding and applying Indian rhythms. He highlights the mathematical and improvisational elements of Indian music, enabling Western musicians to integrate these concepts into their practice.

One of Schimpelsberger's key strengths is his ability to rhythmically translate konnakol to the drum set, enhancing its expressive range. This translation process requires careful consideration of the tabla's tonal and rhythmic subtleties, ensuring that the essence and intricacy of the original pieces are maintained. Schimpelsberger (2011:3) characterizes rhythm as an architecture of space and time, reinforcing this idea by referencing a statement from mathematician Stan Gudder:

The essence of mathematics is not to make simple things more complicated but to make complicated things simple.

This is the essence of this thesis and what should be considered an excellent approach to such a thorny topic. Therefore, I fully share this view, considering it one of the few solutions to this issue, if not the only one.

Nevertheless, Schimpelsberger often showcases his ability to integrate tala cycles seamlessly into his drumming in his performances and recordings. For example, in the song *Raga Mela* from the *Circle of Sound*

project, he fuses traditional Indian rhythms with contemporary ones, creating a rich and layered rhythmic texture.

Another example is his video performance, *Tabla Meets Drums*, which showcases his ability to adapt traditional tabla compositions to the drums. He performs traditional tabla compositions, translating their intricate rhythms and bols onto the drums.

Furthermore, his use of *Tihai* in his solos adds a distinctive flavor, demonstrating his deep understanding of Indian rhythmic structures and their application in a Western context.

Thus, I decided to analyze two drummers who employ two distinct languages, one Hindustani and the other Carnatic, and approach the drums in two different ways. The first is more attentive to the cycle and the sound, and the other is merely rhythmic.

Dan Weiss and Bernhard Schimpelsberger are key figures in blending Indian classical rhythms with Western drumming, yet their methods showcase distinct facets of this integration. Weiss meticulously translates tabla rhythms for drums, striving to convey the full sonic and tonal spectrum of the tabla. Conversely, Schimpelsberger aims to maintain the rhythmic essence of tabla patterns without mimicking their sound, instead adapting them to the drum kit's unique character.

To elaborate, Weiss's approach underscores the importance of precise sonority, skillfully aligning each tabla bol with an equivalent sound on the drum kit. This careful focus on timbre enables listeners to experience a direct tonal representation of the tabla language. In contrast, Schimpelsberger primarily zeroes in on the rhythmic framework of the tabla, upholding its cyclical and structural qualities while forgoing direct tonal imitations. As a result, while Schimpelsberger's method facilitates the recognition of rhythmic cycles, understanding the tabla language may be essential for fully grasping the underlying patterns.

Both perspectives are creative and significant, yet they embody different ideologies of hybridization: Weiss emphasizes tonal and linguistic accuracy, while Schimpelsberger favors rhythmic adaptation and reinterpretation. Each perspective provides distinct insights into the fusion of Indian classical music with Western percussion.

In his book, the drummer focuses on tala calculations, tihai frameworks, rhythmic structures, and the systematic application of rhythmic

variations. This approach serves as a bridge, transforming oral traditions into semi-mathematical formulas, thereby making Indian rhythm more intellectually accessible to Western percussionists.

Schimpelsberger presents a practical guide that outlines how konnakol syllables relate to rhythmic units. He thoroughly examines tihai construction, adjustments, manipulation of pauses, and the development of advanced cyclic structures, illustrating the mathematical nature of Indian rhythm. (2011:25-36)

In the middle of the book (2011: 37-42), it's fascinating how the drummer approaches polymetric thinking. This idea involves transitioning between different tempos within a cycle, focusing on micro-beat subdivisions and speed variations. By demonstrating a smooth transition between subdivisions, such as shifting from 4 notes per beat to 5 or 7, he introduces a level of polyrhythmic flexibility that is rare in traditional Western music education.

In section 4.1, he indeed proposes an exercise that shifts from 4 subdivisions (quarter note pulse) to 5 (quintuplet pulse) within the same beat, inspired by the practice of Indian tala modulation.

For me, utilizing his book as a methodological reference is essential since Schimpelsberger has genuinely studied Indian traditions, translating them into Western contexts rather than merely extracting them. He has created original exercises while respecting the cultural logic embedded in Indian music.

As the author himself remarks, konnakol must ultimately be "felt, not calculated" (2011:7). This idea aligns with critiques from scholars like Nettl (2015), who warn against removing non-Western music from its context. Therefore, this research presents Schimpelsberger's work as a thoughtful model of hybridization, acknowledging the risks of reducing Indian rhythmic traditions to mere technical exercises, devoid of their broader cultural and spiritual significance.

In conclusion, although firmly grounded in the strict mathematical foundations of Indian rhythmic cycles, the cadence exhibits exceptional adaptability in its application, making it a crucial element for both structural closure and improvisational creativity. Its capacity to generate tension and resolution while fitting seamlessly into various temporal

frameworks highlights its significance not only in Indian classical music but also in jazz and other Western improvisational forms. This section emphasizes the cadence's playful nature and creative possibilities by showing how it can be tailored to diverse beat structures while maintaining its core tripartite design. Furthermore, exploring *tihai* illustrates the delicate balance between rigid frameworks and artistic expression, a key aspect of rhythmic blending. Whether anchoring an Indian raga performance or adding emphasis to a jazz improvisation, the *tihai* functions as both a rhythmic culmination and a catalyst for creativity, unveiling new avenues for musical interaction across traditions.

Attila Gyárfás: Approach to the Tihais in a jazz context

Continuing with the concept of *Tihai*, I wish to explore Attila Gyárfás's insightful thesis, which examines this vital rhythmic element of Hindustani classical music and presents a noteworthy alternative perspective.

By mentioning Attila Gyárfás, I acknowledge another musician who has explored the incorporation of Indian rhythmic concepts, particularly *tihais*, into jazz drumming. While my analysis of his work will not be as comprehensive as that of Dan Weiss and Bernhard Schimpelsberger, Gyárfás's approach remains significant. His exploration provides a broader context, illustrating how another artist has approached the synthesis of jazz and Indian music. Gyárfás's focus on *tihais* underscores their versatility in jazz—a key theme of my thesis—and highlights the importance of these rhythmic structures in intercultural musical exchanges. My mention of Gyárfás aims to position my research within a continuum of related studies, reinforcing its focus and clarifying my emphasis on the distinct methodologies and innovations of Weiss and Schimpelsberger. This reference is not a detailed analysis but rather a strategic note to underscore the relevance of *tihais* in jazz drumming, highlighting the broader applicability of the concept beyond my primary case studies.

As mentioned earlier, *Tihai* is both a compositional and improvisational device that generates rhythmic tension and resolution, thereby enriching the rhythmic vocabulary of jazz.

As explored in the previous chapters, the *Tihai* structure is versatile in its composition, particularly in terms of language, duration, and pauses, and

is fundamentally rooted in mathematics. It typically functions to wrap up a phrase and transition to a new one.

Kayda and *Rela*'s compositions always conclude with a *Tihai*, which is paramount because it is commonly employed in the Tabla language during Tabla solos and across all music genres, including dance.

Tihais in Jazz Music: Applications of North Indian Rhythmic Cadences in Jazz-Oriented Contexts by Attila Gyárfás, a Hungarian drummer and composer, explores how North Indian rhythmic structures, particularly *tihai*, can be effectively integrated into jazz music. This work explores the intricate world of rhythmic cadences central to Indian classical music and examines their potential within the improvisational and compositional structures of jazz.

Thus, Attila Gyárfás also discusses how these cadences can be mapped onto jazz tempos and rhythmic cycles, e.g., using *tihais* to manipulate meter through modulation, leading to interesting rhythmic transitions and dynamic interplay between different tempos. For example, a *tihai* pattern can switch from a 4/4 time signature to a $\frac{3}{4}$, $\frac{3}{8}$, or from a 6/8 time signature to a 9/8 or $\frac{5}{8}$ time signature, giving the illusion of a tempo change or as an element to enhance a piece's dynamic range. Below are a few explanatory examples.

As you can see, the Sam that belongs to the rhythmic cycle ends in the next bar, but I still graphically included it in the third repetition of the *tihai*. The chosen phrase, *Tirakite ta tirakite ta*, lasts three bars.

In the first example, we transition from a bar in 4/4 to a bar in 3/4, and the last one is in 3/8. (Fig.9)



Fig.9 - Tirakite ta tirakite ta

In (fig. 10), you can see the same example with a rhythmic variation in the last bar of 3/4 and the whole bar of 3/8, where the varied phrase enters sixteenth note triplets.



Fig.10 - metric variations of Tirakite ta tirakite ta

Below are two more examples of *Tihai* based on the exact phrase. The first example sets the cadence in $\frac{1}{4}$, $\frac{6}{8}$, $\frac{9}{8}$, and $\frac{3}{8}$ ¹⁰⁰ measures. (Fig.11)



Fig.11 - Tihai in $\frac{1}{4}$, $\frac{6}{8}$ and $\frac{9}{8}$ bars

Next (fig. 12), there are two $\frac{6}{8}$ measures, one $\frac{5}{8}$ measure, and one $\frac{3}{8}$ measure.



Fig.12 - Tihai in $\frac{6}{8}$ and $\frac{5}{8}$ bars

To better contextualize the application of any *tihai* within a *tala*, I will present an example of a *tihai* in a 16-beat cycle, specifically *teentaal* (Fig.13), using a previously mentioned excerpt, *Tirakite Ta*. The *teentaal* will be divided into four bars of 4/4 each (totaling 16 beats) to enhance clarity.

¹⁰⁰ All $\frac{3}{8}$ measures identify the Sam, so the time of the measure is arbitrary for explanatory purposes.

Teentaal:

Dha Dhin Dhin Dha
Dha Dhin Dhin Dha
Dha Tin Tin Ta
Ta Dhin Dhin Dha

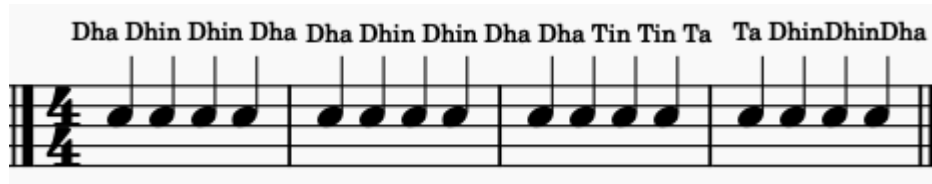


Fig. 13 - Teentaal

It is essential to consider that the tihai, a cadence repeated three times, is a conclusive cycle phrase and can start from any place of the tala as long as it respects its nature. Hence, this instance comprises three bars of tala, concluding with the tihai in the final bar (Fig. 14), corresponding to beats 13-16 in the teentaal count.

Teentaal + Tihai:

Dha Dhin Dhin Dha
Dha Dhin Dhin Dha
Dha Tin Tin Ta
TirakiteTa tirakiteTa Tirakite / (Dha¹⁰¹)



Fig. 14 - Teentaal + Tihai

It is worth noting that I could have lengthened the phrase and initiated it from any beat of the tala, using pauses and honoring the cadence's natural flow. Another example (fig. 15) is where the tihai starts on the fourth beat of the third bar (12 beats of the teentaal).

¹⁰¹ Sam of the teentaal.



Fig. 15- - Teentaal + Tihai

Subsequently, I will write the tala incorporating the complete tihai from the first example I provided, TirakiteTaTirakiteTa.

As you can see, the tihai, in this case, begins on the upbeat of the eighth beat of the tala and ends on the Sam. For ease of reading, I give the example of the *tihai* in 4/4 (Fig. 16), aware that I am considering a cycle of 16 beats.

Teentaal:

Dha Dhin Dhin Dha
Dha Dhin Dhin Dha
Dha Tin Tin Ta
Ta DhinDhin Dha

Teentaal + Tihai:

Dha Dhin Dhin Dha
Dha Dhin Dhin Dhatira
kite ta tirakite ta tira
kiteta tirakite ta tirakite ta tirakite /TA



Fig. 16 - Teentaal + Tihai

By grasping and implementing the structured yet adaptable essence of Tihai, musicians can broaden their rhythmic vocabulary, adding new layers of complexity and creativity to their performances.

As a result, his thesis provides significant insights into the Tihai technique, illustrating how various jazz musicians have employed it throughout history. It offers clear, detailed examples of its application in both composition and drumming within a jazz context.

There are, therefore, different types of existing tihai and their characteristics, such as the quality of the notes, the presence or absence of pauses¹⁰², the complexity of the phrase due to their length that can also cover more than one bar, and finally, their ability to create tension to move from one section to another.

The basic idea of *Tihai* is that it creates the illusion of moving the strong beats of the piece or superimposing a beat on the original one. This new rhythmic layer on top of the other creates tension, which is released on the last note of the tihai, which usually falls on the tala sam, the first beat of the rhythmic cycle.

While writing, the author mentions examples of jazz musicians¹⁰³ who have used Tihai, aware of the rules and roles of Indian music, highlighting the various ways of solving Tihai in terms of notes and rests used and orchestration on the drum set.

For example, Elvin Jones, Coltrane's drummer, employed polyrhythm and was introduced by Coltrane himself to some Indian techniques, like Tihais. (2015:15)

Jones used Tihai, which became typical in his playing at medium and fast tempos.

This *Tihai* (Fig.17) is composed of a swing groove in $\frac{3}{4}$ played in a 4/4 bar. Specifically, the hi-hat (foot) marks the $\frac{3}{4}$ groove, while the snare drum accents the second eighth note of beat 4.

This can also be observed in the piece "A Love Supreme" by the John Coltrane Quartet (1965); Jones employs three figures (Fig.18) to accompany the solos of Coltrane and McCoy Tyner, the pianist.

¹⁰² The Bedum tihais (or bedumdar) do not have pauses separating the palas (Courtney). The phrases are played continuously. The Dumdar tihais (Courtney) have silence or a long note between the palas.

¹⁰³ For example Billy Strayhorn's 'Rain Check' (Ellington 1999), Thad Jones' piece called 'Little Pixie' (Jones, Lewis 1967), 'Impressions' (Coltrane 2007), Larry Young (Green 1964), Rudresh Mahanthappa (Mahanthappa 2007), etc.



Fig.17 - Tihai applied to a swing groove



Fig.18 - Tihai in triplet

Nevertheless, objectively speaking, creating a phrase that is repeated three times with a natural resolution in one of the following bars has become a common practice, especially within a Western context.

Developing and integrating drumming and compositional voice is both imperative and exciting in jazz and Western genres. Therefore, I want to incorporate this Indian rhythmic structure into my playing to enhance creative expression in jazz performances.

In conclusion, the *Tihai* structure, once again, represents a profound and versatile rhythmic concept that bridges Indian classical music and jazz. Its mathematical precision and flexibility make it a compelling tool for generating rhythmic tension and release, especially in compositions and improvisations. Musicians like Elvin Jones have effectively integrated tihai into jazz, demonstrating its capability to manipulate time signatures and modulate tempos. Studying and incorporating tihai into modern drumming will enable me to add complexity and creativity to my rhythmic language, helping me develop a new perspective on learning, teaching, and performing.

Trilok Gurtu as a critical review

Trilok Gurtu is an internationally renowned Indian percussionist, composer, and bandleader who is celebrated for his innovative fusion of Indian classical music with jazz, rock, and world music.

Initially trained in Indian classical percussion, Gurtu mastered the tabla under the guidance of Pandit Ravi Shankar and the tutelage of Ustad Zakir Hussain's father, Ustad Allah Rakha. His unique artistry emerged when he switched to the drums, fusing Indian rhythmic patterns with Western percussion techniques. This versatility has allowed him to collaborate with legendary musicians such as John McLaughlin, Jan Garbarek, Joe Zawinul, and Don Cherry.

Trilok's distinctive style is characterized by his ability to seamlessly blend intricate Indian rhythms with jazz improvisation and global musical influences. His innovative use of hybrid percussion configurations, combining tabla, cymbals, gongs, and electronic elements, has redefined the possibilities of rhythm in contemporary music.

Percussion studies have long bridged the gap between Eastern and Western traditions by integrating their techniques, concepts, and principles. Historically and presently, percussionists share methods and collaborate to forge new genres and aesthetics, enhancing and evolving artistic languages.

I focused on Trilok Gurtu to showcase the compositional and technical potential of integrating the Tabla language within the Jazz drum set. He is a pioneer in blending these musical realms and exemplifies the essence and aim of my research.

Gurtu's creativity is evident in his capacity to adapt and broaden traditional Indian compositions for an international audience. He has skillfully integrated the Indian rhythmic framework into modern drumming, establishing a connection between these two musical genres. His approach to tala is notably innovative. He regularly weaves traditional tala structures into his drumming compositions and improvisations, deconstructing them into their fundamental elements and reinterpreting them through various rhythmic drum variations.

The lighting sequences of strokes typical of a *Rela* and the *Tihais* in his drum solos are timeless. He often bases his compositions on traditional forms, such as *Kaida*, *Rela*, and *Laggi*, and embellishes them with

elements from other genres. This is especially evident in his live performances, where he may start with a traditional Indian song and gradually introduce jazz harmonies or African rhythms, creating a dynamic and evolving musical experience. He also bases his *sung* and *non-sung* improvisations on electronic influences.

Gurtu is a skilled drummer whose deep understanding of the tabla and drums enables him to shift fluidly between the tabla's complex rhythms and the drums' versatile dynamics. This blend of skills underpins his innovative rhythmic style.

During his career, he often customizes his percussion setup to meet the specific needs of his fusion style, blending traditional tablas with a standard drum kit and incorporating a variety of global percussion instruments. Some unusual aspects of Gurtu's drum playing include playing without a drum stool, in a half-kneeling position on the floor, and using an unconventional kick drum that resembles a large drum head with a kick pedal, as well as a mix of tabla and Western drums. His unique percussion signature involves dipping cymbals and strings of shells into a bucket of water to create a shimmering effect.

Furthermore, Trilok Gurtu employs various innovative techniques on the tabla to expand his sonic possibilities within a jazz context. Throughout his career, he blended percussion and drumming techniques. He can employ extensive techniques, such as finger slides, attenuated strokes, and various hand positions, to create different sounds and textures, as well as emulate the tonal qualities of traditional jazz percussion instruments while maintaining the distinct timbre of the tabla. For instance, during one performance, he played an ostinato jazz rhythm on the ride cymbal with the stick in his right hand while using his left hand to play the bayan with his fingers and wrist, producing rhythmic and glissando effects.

This fascinated me the most and stimulated me to pursue this investigation. Gurtu's strength lies in enhancing the two traditions, redefining the possibilities of intercultural dialogue in the global musical landscape.

It is vital to highlight that the study of African Music, centered on the Clave system, the use of polyrhythms, and its parallels with Indian Music,

demonstrates that various traditions do not conflict, challenging common misconceptions.

Music is one and cannot be polluted as its tremendous power. (...) I have done a crossover with many musicians¹⁰⁴ from different systems. Music is about communication, and it cannot be just one-sided. In Indian Music, the concept of melody and rhythm is very comprehensive, and there is no other culture in which we find a melody/raga explored as extensively as in Indian Music. (Pinckney, 1990: 40,41,45)

Again, in an interview with *All About Jazz* (2013), Gurtu stated:

Music is one. There should be no borders. I have always believed in bringing together the best of both worlds—East and West—to create something new and exciting.

Trilok Gurtu's innovative approach to musical crossover, particularly his fusion of African and Indian music, has been regarded as a testament to his profound understanding and respect for diverse musical traditions. His work expands the possibilities of musical expression and promotes meaningful dialogue between cultures.

As musicians who strive to merge different musical traditions and expand creative possibilities, we owe much to Trilok Gurtu. His groundbreaking work, particularly within a period of genuine innovation in fusion, offered new possibilities for integrating Indian and Western music. Gurtu's explorations broadened our understanding of rhythm and compositional possibilities, laying the foundation for a new cross-cultural exploration that many contemporary musicians continue to build upon. Musically, his impact has been crucial in creating a more inclusive and versatile hybrid drumming landscape.

A critical review of Gurtu's work provides a broader and more dynamic perspective than a case study. This approach enables an in-depth exploration of hybrid drumming and a comprehensive analysis of his technical and stylistic evolution, which aligns closely with my thesis. By situating his techniques and musical viewpoint within a larger context, a

¹⁰⁴ In his collaborations with African musicians, such as Angélique Kidjo, Gurtu sought to fuse these rhythmic complexities. By integrating African polyrhythms with Indian tala cycles, he created a fusion that retained the distinctive character of both traditions while forging a new and cohesive sound. This approach is evident in songs like "Ivory Coast" from his album *Living Magic*, where the rhythmic interplay between Indian percussion and African drums forms the foundation of the Music.

critical review creates a richer and more adaptable framework, highlighting the relevance of Gurtu's methods to my research.

Conducting a critical review is vital for assessing Gurtu's influence, as his groundbreaking techniques and concepts provide valuable insights into the mechanics of musical fusion and cultural exchange. His work deepens our understanding of how tabla language and rhythmic complexities can merge into contemporary jazz drumming, making his techniques an essential resource in my study of rhythmic hybridity.



Trilok Gurtu performing live¹⁰⁵

¹⁰⁵ Photographer unknown. This image, taken on the web, is used under fair academic use for scholarly and non-commercial purposes. Every attempt has been made to trace the original source.

Analysis of Gurtu's Performances

Several technical and conceptual elements make Trilok Gurtu's approach particularly valuable for this thesis, especially when examining his playing, notably his solo performances on non-canonical drums and tabla.

Gurtu is renowned for his distinctive fusion style, which seamlessly combines the rhythmic and tonal complexity of Indian tabla with Western drumming techniques. Trilok Gurtu's drumming embodies a continuous process of adaptation, experimentation, and redefinition of rhythmic structures. His technical innovations, ranging from tabla-drum adaptations to orchestral gestural drumming, serve as a model for drummers exploring hybrid traditions. His trajectory serves as a crucial reference point for my research, demonstrating how tabla can be transposed to drums and transformed into a broader rhythmic language that expands the boundaries of both Indian and Western percussion traditions.

Trilok Gurtu's drumming and percussion style exemplifies cross-cultural rhythmic fusion, seamlessly blending tabla phrases, konnakol, jazz rhythms, and extended techniques into a highly expressive and fluid performance. Over the years, his drumming has transitioned from a more structured Indo-jazz fusion style in the 1970s to a unique and eclectic percussive voice that transcends genre limitations. In the following sections, I will examine key technical elements of his playing, illustrating its evolution through various stages of his career.

So, starting from the early period of his career (1970s-80s), his early recordings, particularly with John McLaughlin¹⁰⁶, reveal a solid grounding in tabla and jazz drumming. His drumming is precise but strongly groove-oriented, adapting tabla phrases to the drums with a clear focus on articulation.

In his drumming, rather than traditional snare and tom strokes, he imitated tabla articulations like *Na*, *Tin*, and *Dha* by playing with his fingers on the toms and snare while keeping the snares turned off¹⁰⁷.

He employs a hybrid technique that involves both sticks and hands, alternating between sticks and mallets while also playing with open

¹⁰⁶ https://www.youtube.com/watch?v=eWYExPjAk8E&ab_channel=BobLoblaws

¹⁰⁷ <https://www.youtube.com/watch?v=e7hCGbq2zu4&t=297s&pp=ygURdHJpbG9rIGd1cnR1IHNVbG8%3D>

hands, exploring the dynamic contrast between resonant and muted strokes. Additionally, from his early years, Gurtu integrated rhythmic vocalizations (konnakol) into his drumming¹⁰⁸, using them both as a teaching tool and as an improvisational device.

In the 1990s, during his solo career (Usfret, 1988; Crazy Saints, 1993), Gurtu's drumming became more structured. His collaborations with Joe Zawinul and Jan Garbarek showcased a deeper fusion of Indian rhythmic patterns with Western drumming. The style evolved into a hybrid percussion setup, blending traditional jazz and fusion drumming with tabla, kanjira, udu, and various metal percussion elements (e.g., water¹⁰⁹ drums).

Pieces like "Ballad for Two Musicians" (1993) highlight his ability to maintain multiple rhythmic cycles simultaneously. He blended a swing groove on the hi-hats with intricate phrasing influenced by the tala in his left hand. Additionally, Gurtu refined his brush-on-the-skin technique, enabling him to emulate the sliding tonal variations of the tabla on the drumheads.

Another example is his tabla performance with the Pharoah Sanders Quintet, where he showcases his ability to maintain complex tala cycles while incorporating elements of jazz improvisation. His phrasing, mainly through *tihais* and *kaidas*, is adapted to fit jazz structures, enhancing the music without sacrificing the integrity of the original forms.

In this project, his playing strikes a balance between subtlety and intensity. He often incorporates fast, syncopated bols that create intricate polyrhythms, aligning with Sanders' ethereal jazz vibe. His nuanced control over the tabla sounds, from resonant bass notes to sharp accents, exemplifies his ability to blend percussive dynamics with melodic sensitivity as an independent voice while continuously listening to and supporting the other musicians¹¹⁰.

This solo is one of many demonstrations of virtuosity in playing the tabla in a jazz context, creating an immersive experience that defies genre.

¹⁰⁸https://www.youtube.com/watch?v=dg0AHN9lqH0&ab_channel=Jazz%7C%E1%B4%B3%E1%B4%BF%E1%B4%B1%E1%B4%B1%E1%B4%BA

¹⁰⁹ https://www.youtube.com/watch?v=DAw4Bk19w8g&ab_channel=RoddyMelville

¹¹⁰<https://www.youtube.com/watch?v=VQE7HDqUztl&pp=ygUZdHJpbG9rIGd1cnR1IHdpdGggU2FuZGVycw%3D%3D>

Gurtu's distinctiveness in performance is evident in the fluidity of his style. He effortlessly shifts between drums and tabla, producing a continuous flow of music without interruption.

Going forward, as he progresses in his solo, Gurtu's choice to interlace tabla phrases—often based on laggi or kaida patterns—into the broader textures of the drum kit creates a richly layered rhythmic landscape. In *Once I Wished a Tree Upside Down*, he deftly modulates across varying time signatures while remaining grounded in an accessible downbeat. This approach reveals a sophisticated rhythmic awareness, blending complex polyrhythmic structures with fluid metric modulations. By balancing Indian rhythmic forms with the drum kit's versatility, Gurtu demonstrates remarkable freedom in rhythm, allowing each pattern to serve both as a framework and a vehicle for spontaneous expression.

Finally, in the contemporary period (2000s-present), Gurtu has broadened his vocabulary, incorporating electronics (Spellbound, 2013) and collaborating with large ensembles (God Is a Drummer, 2019). His approach now fluctuates between minimalist and orchestral, emphasizing space, texture, and unexpected timbral shifts.

He often triggers pre-recorded konnakol patterns or electronic percussion during solo performances to enhance his live drumming. At other times, he performs it live. Unlike his earlier style, where tabla phrases were distinctly articulated, he now adopts a more gestural and coloristic approach. He often uses water-filled ghatams or cymbal scrapings to produce abstract textures. Furthermore, his view of grooves has shifted dramatically; they now rely on simpler patterns punctuated by rhythmic bursts, rather than intricate polyrhythms and constant density.

For instance, in *Broken Rhythms*, he begins with a slow, meditative tabla piece and layers syncopated phrases, often with intense accents and fills, onto the drums. Here, his use of syncopation reflects a fusion of jazz phrasing and Indian tala cycles, emphasizing the rhythmic elasticity that is central to both traditions.

The piece showcases his skill with odd time signatures and polyrhythms, which he layers with syncopations and tempo changes that give the music an unpredictable, almost colloquial quality. His tabla strokes, such as *Na*, *Tin*, and *Dhin* (accompanied by a slide), and Western drums create a distinct tonal language that complements and contrasts with his tabla work.

A notable feature in this solo is the tension and release through sudden stops, accented bursts, and complex tihai phrases, adding depth to the texture. He also plays a solid and rooted drum groove. Again, this is another example of hybridized drumming where you can feel and hear the integration of both musical realities.

He also uses tihai patterns as transitional elements, allowing him to move from one groove or tempo to another. This technique adds texture and surprise, bringing the listener’s attention back to the center of the rhythm each time he resolves to *Sam*.

I mention Gurtu's vocalization of rhythmic syllables for knowledge, although I will not incorporate it into my music journey. This technique not only gives the audience an audible guide to his intricate rhythms but also enhances the interplay between spoken rhythm and instrumental performance.

The benefits I gain from this are primarily during the study phase, which is integral to learning the tabla. By integrating vocalized rhythmic structures into drum solos, I can enhance and refine my improvisational phrasing, particularly when engaging with Indian rhythmic cycles in a jazz setting. Additionally, incorporating spaces between hits and pauses in performance highlights the groove, improving rhythmic anticipation and making tabla-inspired phrases more sophisticated within a jazz context.

To better illustrate his musical evolution, I would like to present a summary scheme that emphasizes clarity.

Period	Tabla Integration	Konnakol Use	Groove	Techniques & Tools	Ensemble Role
70s–80s	Translated directly to toms/snare	Improvisation cues	Linear, tabla-like phrasing	Drum kit + tabla used interchangeably	Accompanist to soloists
90s–2000s	Hybrid with full percussion setup	Integrated in compositions	Layered polyrhythms, complex cycles	Brushes, fingers, metals expanded setup	Co-driving rhythmic collaborator
2010s–Present	Abstract, coloristic gestures	Often looped/pre-recorded	Shifts between minimalism and density	Electronics, experimental techniques	Orchestral, often soloistic presence

These observations are crucial for the crossover application I aim to implement in jazz drumming. I aim to introduce these ideas to create rhythmic tension and resolution without disrupting the flow of jazz.

Gurtu's solo performance methodology involves various techniques, from finger taps to muted slaps, to create a tonal variation that is uniquely specific to the tabla. One example is his controlled ghosting of tones during solo sections. He draws on the tabla's tonal spectrum while employing cymbals, snares, and toms to create a dialogue of muted and open sounds, resulting in a remarkably nuanced solo.

Since drums do not inherently offer the tonal variation of the tabla, adapting some of Gurtu's tonal differentiations, especially with muted snare taps or open and closed hi-hat techniques, may enhance the subtle soundscapes in my solo performance.

In conclusion, his performances, some more evident and majestic than others, demonstrate a successful crossover approach in which cultural elements coexist and enrich one another, producing a cohesive and innovative musical expression.



La Seine Musicale. Live in Paris 14/11/2021. Paolo Fresu, Omar Sosa, and Trilok Gurtu¹¹¹.

¹¹¹ https://www.youtube.com/watch?v=VujhuCBvko0&t=5263s&ab_channel=PaoloFresu

Methodology

In this thesis, the methodology plays a crucial role in bridging the theoretical and practical aspects of my research, providing a framework to explore how the rhythmic language of tabla can be adapted and applied to drumming in a jazz context. I aim to combine analytical rigor with creative experimentation by drawing on the work of leading ethnomusicologists such as *De Poli*, *Bailey*, *Nettl*, *Schippers*, and *Robson*. These scholars offer insights into how musicians internalize structures, recombine, and improvise, which provides a valuable context for analyzing the fusion of jazz and Hindustani music in a contemporary setting.

My methodology unfolds along two interconnected pathways. First, it involves a comprehensive study and transcription of essential tabla forms, specifically *Kaida*, *Rela*, *Laggi*, and *Tihais*, chosen for their structural complexity and adaptability to drumming. These elements are analyzed to understand their rhythmic, melodic, and improvisational nuances, establishing a foundation for their reinterpretation in a jazz context. This approach enables me to connect with the essence of the tabla and its language while exploring its potential for innovation within a different cultural framework.

The second approach focuses on applying these studies to drums. In this context, I incorporate insights from the ethnomusicologists previously mentioned. Thus, De Poli's emphasis on cultural translation guides my pursuit to maintain the authenticity of tabla techniques when adapting them for the drum kit. Bailey's work on improvisation complements my investigation of rhythmic creativity, while Nettl's research into the blend of tradition and innovation offers insight into the broader implications of my study. Schippers's insights on intercultural music education, along with Robson's perspectives on collaborative practices, propose methods for integrating these approaches into both performance and teaching.

By merging these theoretical insights with the application of tabla rhythms on the drum set, my approach highlights the importance of honoring cultural roots while fostering creative expression. This combined method bolsters my thesis by facilitating a more profound engagement with the tabla language and expanding the possibilities for drumming within a jazz framework. This methodology aims to foster a nuanced dialogue between Indian and Western musical traditions, enriching both through the introduction of new rhythmic vocabularies and innovative

performance practices. To delve deeper into this topic, I will analyze and highlight the perspectives of the scholars referenced in this thesis, signaling their significance to my research and the vital concepts they contribute. This examination will lay the groundwork for understanding how their methodologies and insights can facilitate the adaptation of tabla compositions to drums. In the next chapter, I will concentrate on a practical application, illustrating how these theoretical principles can be utilized to interpret and incorporate *Kaida*, *Rela*, *Laggi*, and other elements within a jazz context.

De Poli (2004: 195) identifies various strategies for structuring a model and examining its parameters. The most prevalent method is measurement analysis, which encompasses multiple phases. One phase involves performing through personal improvisation, while others monitor variables or parameters, depending on the tool's aims and technical capabilities.

Bailey (1993: 18-20) divides improvisation into idiomatic and non-idiomatic forms. Since my research is fundamentally practice-oriented, this method demonstrates how both idiomatic and non-idiomatic improvisation and composition act as expressive tools, enhancing and refining an individual's musical syntax and creating a unique artistic voice.

Nettl (2005: 84-85, 388-392) posits that learning music involves manipulating, deconstructing, and composing various components. This process empowers musicians to devise compositional and investigative strategies, leading to new musical expressions. By mastering smaller elements, musicians can progressively memorize and internalize rhythms, ultimately applying these concepts in their performances. Moreover, the similarities between improvisation in Hindustani music and Western jazz emphasize the importance of material memorization for effective improvisation.

Schippers (2009: 70) explains that the learning process for improvisation typically advances through stages, starting with exact imitation of examples, moving on to spontaneous creation, and ultimately achieving independent improvisation. The interaction between improvisation and repertoire interpretation (compositions) is crucial in both jazz and Hindustani traditions, allowing for flexible interpretations of structured forms.

Robson (2002: 10-11) examines the relationship between research practice and methodology, highlighting how practice enhances theoretical understanding and vice versa.

In summary, the methodology discussed here provides a robust theoretical foundation for examining how both idiomatic and non-idiomatic improvisation influence artistic voices, particularly in the context of my focus on the drum set. Subsequently, my thesis explores the dynamic relationship between jazz and Hindustani music by employing established performance analysis strategies, learning processes, and improvisational frameworks. This blend deepens the understanding of the shared improvisational essence in both traditions, highlighting how the acquisition, internalization, and application of various musical elements give rise to innovative musical expressions.

Chapter Two: Rhythmic Crossroads Between Tabla and Drums

2.1 Creative Process

Rhythm serves as a universal language that crosses cultural and geographic boundaries. The tabla and drums embody two distinct yet complementary rhythmic realms. Converting the tabla's style to drums involves a technical process that merges various musical traditions, philosophies, and performance practices. This section situates my creative journey within a broader theoretical framework, drawing on insights from ethnomusicology, history, and performance studies, as well as practical and strategic considerations. As previously mentioned, hybridization is a central aspect of my creative approach. This translation represents the fusion of two rhythmic legacies: one firmly rooted in a long-standing oral tradition and the other influenced by Western popular and jazz drumming. I will examine several questions that will illuminate and advance the path ahead, drawing on the musicological references that inform my research.

Drawing on Homi Bhabha's concept of the *Third Space* offers a valuable perspective on this process. In my situation, the rhythmic structures and language of the tabla aren't simply transferred to the drums; instead, they enter a transformative phase that creates an innovative rhythmic and melodic language shared by these traditions.

A key theoretical question my work explores is whether the drums can capture the complexities of tabla language without simplifying it to mere stylistic enhancements. Playing the tabla requires a highly intricate articulation system, with each stroke producing a unique variation in timbre and pitch. These subtleties must be reinterpreted on the drums through a different set of sound-producing tools: sticks, cymbals, and pedals. Not only that. It also requires a distinct type of drumhead tuning. By integrating tabla structures into my drumming, I am not only playing Indian rhythms but also internalizing and reconfiguring a rhythmic thought process that challenges conventional Western drumming norms.

In this context, I view creativity as a dialogical process shaped by historical, cultural, and pedagogical influences. In line with this, I can relate Whyton's notion of *authenticity*, which questions the entire concept of hybridization, to the idea that musical traditions constantly evolve through interactions and reinterpretations. This viewpoint is crucial for grasping Indo-Western hybridity. Should we evaluate authenticity solely

based on adherence to "pure" traditional forms? Any attempt to adapt tabla phrasing for a drum kit, as related to my thesis, would be deemed inauthentic. Conversely, if we perceive authenticity as a dynamic process influenced by historical and cultural exchanges, then hybridity shifts from being an act of dilution to a pathway of creative evolution.

This chapter further explores my creative journey in blending these two traditions to develop a distinct rhythmic language. It emphasizes how the precision and cyclical nature of tabla compositions can enhance the flexibility and expressiveness of drumming. My goal is to establish a rhythmic identity that embodies my artistic vision.

Moreover, I outline my motivations, thought processes, and techniques for adapting tabla methods and compositions to the drums. I investigate how these adaptations symbolize a personal artistic quest and strive to create a dialogue that respects their unique qualities while fostering innovation.

Through this process, I address critical questions: *What does it mean to translate one rhythmic language into another? How can the improvisational ethos of tabla be preserved and reimagined in the context of drumming? What are the challenges and opportunities of fusing these traditions without diluting their integrity?*

In this section, I will address some questions that guide my creative process. I will then provide a general overview before delving into more specifics in the relevant sections.

How do I approach this?

My method acknowledges that tabla and drums, although different in their sound and cultural backgrounds, possess a fundamental rhythmic universality. Tabla features bols and cyclical patterns, presenting a language grounded in precise articulation and intricate rhythmic layering. Conversely, drums offer versatility, dynamic range, and a freer rhythmic style that allows for broader self-expression.

In developing my language, I emphasize the harmonious qualities of these instruments. For instance, the tabla's onomatopoeic nature and cyclical character inspire a more organized rhythmic framework. Meanwhile, the spatial and timbral potential of drums leads me to reinterpret these frameworks in both contemporary and jazz contexts. I view this process as a dialogue between tradition and innovation, where tabla phrases, such as *Kaida* and *Rela*, influence my rhythmic concepts for

the drums, adapting them to leverage the drums' distinct features, like brushes, sticks, and pedals, to either mimic or contrast the tabla sounds.

Why did this come to mind?

The aim is to give the drums a new voice, encouraging me, as a drummer, to think "outside the box" and view the drums from both rhythmic and melodic perspectives. Consequently, the analysis and application will incorporate melodic elements, aligning with the research goals that I will elaborate on further.

I draw particular inspiration from the Tabla's improvisational methods within a framework, a concept that echoes jazz drumming and other rhythmic improvisation styles.

What do I wish to create?

My goal is to create a rhythmic language that is both functional and expressive, yet innovative and meaningful. This strategy contributes to the larger scope of intercultural music, opening up new avenues for collaboration and creativity.

Additionally, I intend to utilize this language as a pedagogical tool, showing how musicians and students can enrich their practices by incorporating varied traditions. By deconstructing the elements of playing the tabla and drums, I aim to inspire others to explore hybrid methods and engage in a discourse that values both tradition and innovation.

This process of rhythmic hybridization is about both self-exploration and technical proficiency. By merging the tabla and the drums, I aim to create a language that bridges two musical realms and embodies my distinctive artistic vision.

How do I want to make it?

Creating this language involves several essential steps. First, I analyze the transliteration of tabla rhythms by examining traditional compositions, such as *Kaidas*, *Relas*, *Laggi*, and *Tihais*, to capture their structural and rhythmic essence. This includes breaking down the *bol* into its drum equivalents. For instance, the sounds "Na" and "Dha" can be mimicked on the snare and toms, or kick, while "Ge" and "Ki" might correspond to the bass drum or muted tones.

Next, I will explore adaptation techniques, focusing on how to apply these rhythms on the drum set, which Indian cyclic forms to incorporate into the drum language, improvisation, the creative potential of rhythmic interaction, and the exploration of timbre and texture. Additionally, it's crucial to experiment with the timbral range of the drums to reflect the tonal palette of the tabla.

2.1.2 Revoicing Tradition: Mapping Tabla Language onto Drums

This section explores the creative process of translating tabla vocabulary, adaptation, and phrasing onto the drums. Rather than aiming for direct rhythmic replication, the goal is to repurpose traditional patterns into a new instrumental context, preserving their structural and expressive essence. This approach seeks to honor the rhythmic integrity of the original while expanding its sonic possibilities through the versatility of the drums.

In the practical part of this research, I propose a personal adaptation system that respects the sound quality of each tabla bol, translating specific tabla strokes onto drums. (Fig. 19).

Thus, this legend serves as a reference map to clarify how specific tabla syllables are interpreted and performed using the various components of the drum kit. Each *bol* is assigned a corresponding drum or technique based on its sound quality, articulation, and functional role within the rhythmic context.

This system (Fig. 20) aims to demonstrate how the tabla's rhythmic vocabulary can significantly influence hybrid drums in terms of sound, phrasing, phrasing logic, and compositional thinking. The following legend does not claim to be definitive or exhaustive but reflects a practical and performative approach developed throughout this research.

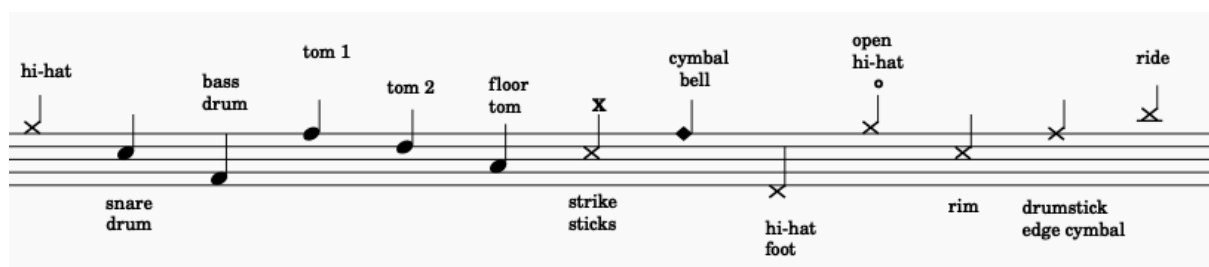


Fig. 19 - Legend

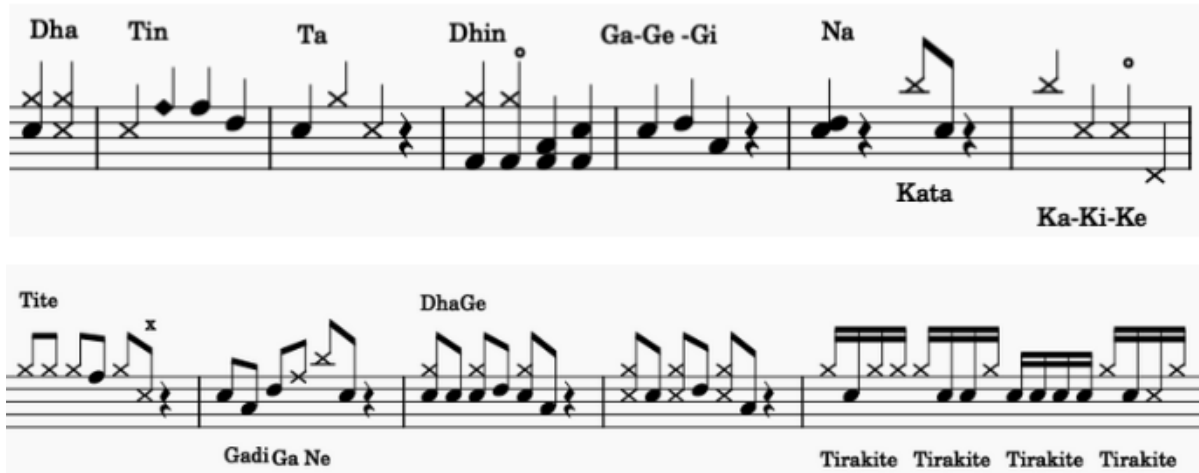


Fig. 20 - Legend with tabla bols

As I reflect on my creative process, I find it particularly intriguing how my work pushes the boundaries of conventional rhythmic structures in Western drumming. By incorporating aspects of the tabla into my drum techniques, I strive to enhance my rhythmic vocabulary in terms of timing, groove, and phrasing.

My method illustrates the versatility of the tabla language in unconventional contexts. While drumming lacks the pitch variations of the tabla, it offers alternative options, such as using cymbals and snare rolls, to reflect tabla-like textures. This translation process aims not to replicate tabla techniques but to identify gestures that preserve the essence of the rhythm while leveraging the unique advantages of drumming.

A vital yet often overlooked aspect of rhythmic adaptation is the role of embodiment and physicality in performance. Playing the tabla closely involves hand technique, where specific finger placements, pressure, and resonance dictate how the rhythm is articulated. In contrast, the drum kit requires multi-limb coordination, with the use of sticks and pedals enhancing the player's engagement with the instrument.

In my adaptation, I proactively examine how tabla phrasing can be reimagined through diverse physical movements. I preserve rhythmic phrasing and dynamics while fully harnessing the expressive capabilities of the drum kit.

Once again, this thesis asserts that rhythmic hybridity is not a static amalgamation of existing elements but a dynamic, evolving conversation that pushes against traditional rhythmic boundaries.

Nevertheless, an alternative approach that may be explored is the *Free association* described by Diethrich (1995: 72–73) and implemented by drummer Bernhard Schimpelsberger, in which the tabla bols are mapped onto the drums without regard for one-to-one translation constraints. This adaptable arrangement facilitates the articulation of tabla-derived rhythms through a diverse array of drum phrasing techniques, promoting expressive freedom while simultaneously preserving the integrity of the original rhythmic vocabulary as it is tailored to align with the drums' stylistic language.

Furthermore, I aim to incorporate traditional rhythmic phrases from the tabla language, including *Tirakite* commonly used for *Tihais*, along with the tabla phrase *DhatiDhagenaDha Tirakite*. This case study will be applied within the context of a jazz repertoire.

Below (Fig. 21), I present a selection of possible adaptations of the previously discussed tabla phrase onto the drum set, using the corresponding mapping system outlined in the legend above. These examples are not fixed transcriptions but rather interpretive realizations meant to illustrate how tabla language can be expressed through the physical and sonic layout of the drum set.

It is important to emphasize that the rhythmic realization of each phrase may vary depending on several factors, including the intrinsic nature of the tabla composition (e.g., whether it is a *Kaida*, *Rela*, or *Laggi*), the required articulation and dynamics, and the interpretive choices made by the performer.

In particular, the rhythmic figuration, how the strokes are grouped, accented, and articulated, can shift in response to the drummer's intention, the stylistic context, and the specific technical demands of executing tabla-like phrases on the drum set. This adaptability reflects both the flexible character of the tabla language and the creative potential of hybrid instrumentation.

These examples aim to demonstrate the richness and nuance that can emerge when the tabla's rhythmic logic is reimagined within the

framework of Western drumming, fostering an informed and innovative approach.



Fig. 21- *DhatiDhagenaDha* Tirakite applied on drumset

Adapting tabla compositions to the drums is not simply a technical or transcription exercise. As explained in previous sections, it involves a constant negotiation between faithfulness to the rhythmic structures of the original tabla phrases and the expressive possibilities of the drums. In this sense, adaptation becomes a form of improvisation, requiring listening, responsiveness, and the courage to depart from exact imitation in favor of musical coherence and personal voice.

This aligns directly with a central aspect of my creative process: the interplay between structure and spontaneity. As I have discussed previously, musical improvisation, particularly in cross-cultural contexts, relies on a delicate balance between predetermined structures and the freedom to reshape or reinterpret them. Adapting tabla patterns to a new instrumental language is both an anchor and a starting point. It is through this process that identity begins to take shape.

Scholars such as Wim van der Meer and McNeil highlight this interplay between form and flexibility as a hallmark of improvisation. Similarly, in my work, rhythmic figures derived from classical Indian forms are not simply quoted, but reinterpreted through the filter of jazz sensibility and personal intuition. Fixed elements of tala and compositional structures, such as *Kaida* or *Tihai*, provide the scaffolding; improvisation animates them in real time. Therefore, each adaptation is also an interpretation, a decision on how to inhabit and transform tradition into something contemporary and meaningful to the individual.

This constant oscillation between structural awareness and improvisational freedom defines my creative process, where hybrid drumming becomes not only a technique but a form of artistic authorship.

In musical improvisation, the balance between fixed structures and creative freedom is essential to shaping a musician's artistic identity. This interplay between what is composed and what is invented in the moment forms the core of improvisatory practice and is a subject of critical inquiry for scholars such as Wim van der Meer and Adrian McNeil.

Wim van der Meer (2018: 47–50) explores this balance in the context of Indian classical music, examining how improvisation mediates between tradition and innovation. He characterizes improvisation not as the opposite of structure, but as a natural extension that requires a deep internalization of musical grammar. For van der Meer, authentic improvisation emerges when a musician, having thoroughly assimilated compositional and stylistic norms, can transcend them with spontaneity that still resonates with the form's integrity. He contrasts this with the reproduction of learned patterns, which lacks the risk and responsiveness defining authentic creative engagement.

Conversely, Adrian McNeil (2007:4-21) similarly emphasizes that effective improvisation does not discard the composed; instead, it sustains a continuous presence of structured material, however subtly. He asserts that

..effective improvisation in this context means the composed material is never fully absent.

This concept is significant when blending Indian rhythmic traditions with Western drumming. The interplay between set elements and improvisational creativity creates a dynamic environment for expression. Here, improvisation evolves from mere invention into a conversation within a foundational framework, such as a composed melody, a *tala*, or a defined groove.

This insight is particularly relevant when considering the integration of Indian rhythmic traditions into Western percussion practices.

In the context of cross-cultural rhythmic fusion, the relationship between predetermined structure and improvisational invention becomes more complex and generative. It is essential to remain attuned to both traditions, maintaining the logic of *tala* cycles or traditional compositions such as *Kaida*, while navigating the freedom and responsiveness characteristic of jazz.

As McNeil suggests, improvisation does not oppose structure, but rather extends it, bridging the past and present, tradition and innovation, discipline and freedom.

Building on the interplay between structure and freedom in improvisation, another essential technique that supports expressive clarity is the intentional use of space, particularly through strategically placed pauses and silences between musical phrases. This practice, common in solo tabla performances, serves a dual role in creating tension and anticipation while reinforcing the structure of the rhythmic cycle. When tabla players pause before elaborating a *Mukhda*¹¹² or entering a *Tihai*, the listener is drawn into the tala below, highlighting the relationship between breath, silence, and pulse.

This concept finds a strong parallel in jazz drumming, where the use of space is not simply the absence of sound, but an active compositional device. As the famous quote attributed to Miles Davis, who encapsulates his philosophy on musical restraint and the importance of space in jazz improvisation, states:

Sometimes it's not the notes you play, it's the notes you don't play.

Silence pulses rhythmically, allowing the listener to elaborate, anticipate, and immerse themselves more deeply in what follows. Here again, improvisation transcends mere embellishment and becomes an integral part of a larger narrative or architectural logic within the performance.

This sense of rhythmic breath is crucial in adapting tabla techniques to drumming, particularly within a hybrid improvisational idiom. Pauses between subdivisions, implicit rhythms, or even dynamic phrase shaping through silence can recreate the nuanced tension of tabla playing. This also supports the structural coherence of improvisation, especially when dealing with complex tala-based forms such as Tintal or Rupak, where the return to Sam is both a structural and emotional anchor.

Furthermore, this approach reinforces the idea that improvisation is not a formless exploration, but a process rooted in discipline, memory, and

¹¹² In Indian music, particularly in Hindustani classical music, "mukhda" refers to the opening phrase or section of a musical composition, often considered the main theme or refrain. It literally translates to "face" or "entry point". The mukhda typically introduces the song and sets its overall tone.

creative risk. As McNeil and van der Meer observed, improvisation is most effective when it reflects an artist's internalization of the form, resulting in imaginative solutions that still resonate with the tradition from which they come.

Fusing tabla and jazz drums, therefore, requires not only technical mastery but also an open and experimental mindset. The creative process becomes an ongoing dialogue between innovation and respect for the source material. Expressive freedom is not opposed to structure, but instead nourished by it. As such, improvisation becomes a form of real-time composition, a space where tradition and experimentation coexist.

Expressive freedom serves as a key practice. Experimenting with new sounds, patterns, and rhythms stimulates the imagination to venture into uncharted territories. As such, improvisation is intrinsically connected to creativity, inherently linking it to various facets of the creative process without any limitations.

Creativity in rhythmic hybridity is not a rejection of tradition or an indiscriminate invention; rather, it is an imaginative act of reconfiguration. Whether through improvisation, adaptation, or compositional design, the creative process in this context relies on listening: listening to form, history, silence, and the self. As such, creativity also serves as a means of understanding, negotiating, and expanding the space between traditions. This space, where improvisation, memory, and imagination intersect, is where hybrid rhythmic identities truly take shape.

In her book, Sheila Davis (1992:1) opens quoting Carl Jung¹¹³:

Every good idea and all creative work is the fruit of the imagination.

Jung's vision frames creativity as an act grounded in the imagination's ability to synthesize the known and the unconscious. In musical improvisation, particularly in the fusion of Indian and Western percussive traditions, this imagination serves as a vehicle for innovation, memory, and identity.

¹¹³ Carl Gustav Jung was a Swiss psychiatrist, psychoanalyst, anthropologist, and philosopher, one of the leading intellectual figures of psychological, psychoanalytic, and philosophical thought.

Some ethnomusicologists have expanded upon these Jungian insights by exploring the psychological, cultural, and symbolic dimensions of musical creativity. Steven Feld (1982), for instance, emphasizes that when musicians engage with music outside their native tradition, they do not simply replicate foreign sounds; instead, they participate in a dialogic process shaped by history, affect, and a psychological layering of meaning. Feld introduces the concept that musical creativity in intercultural contexts involves a "resonance" of past experiences, where sonic memories interact with new aesthetic patterns.

Similarly, Bruno Nettl (2005) reflects on improvisation in various cultures, highlighting the tension between internalized structure and free exploration. Like Feld, Nettl does not view improvisation as arbitrary, but as a meaningful negotiation between what is deeply known and what arises in the moment. This closely parallels Jung's notion of the collective unconscious, where inherited symbols and patterns of expression shape how individuals generate new art forms.

These patterns help illuminate what drummers often describe as having rhythm "in their blood." This expression is not merely metaphorical: it signifies the internalization of culturally specific rhythmic archetypes that appear intuitive, even instinctive, and guide spontaneous creation. This embodied memory reflects what Jung might call archetypal imprints: rhythmic patterns that transcend individual learning and emerge through creative acts rooted in tradition.

In conclusion to this section, I want to emphasize how improvisation engages various aspects and serves as a gateway to deeper dialogue between rhythmic systems, cultural memories, and personal expression. Instead of merely juxtaposing tabla techniques with jazz drums, I aim to internalize their distinct logics, letting spontaneous creation arise from a foundation of structural understanding and emotional resonance. Here, creativity is an act of translation among instruments, cultures, histories, and different ways of listening and perceiving.

2.2 My Drumkit Setup

The drums serve as both an instrument and a platform for cultural exchange, creating a rich space for innovation and cultural exchange. In my research, they transcend their status as a simple percussion instrument; they become a hybrid arena where rhythmic traditions intersect, adapt, and engage in dialogue. Creating a customized setup that integrates the vocabulary and articulation of the tabla into the structure of jazz drumming is not only an aesthetic decision but an essential methodological element. This customized approach underpins my research on intercultural rhythm and improvisation, highlighting how instruments can embody and foster dialogue between different musical worlds. By reinventing the drums as a vibrant platform to merge tabla phrasing with jazz sensibilities, I strive to cultivate a musical landscape where hybrid expressions arise organically from the interaction of traditions.

Hence, in support of my thesis and the practical applications I intend to explore, developing a hybrid drum kit that integrates jazz traditions with the language of tabla is both methodologically and creatively vital. This decision is grounded in comprehensive research and resonates with Lopes' (2019) *Big Three concept*, which highlights the bass drum, snare drum, and hi-hat as the essential components of the drum set. These elements shape the drum kit's identity and offer a versatile basis for incorporating the rhythmic and tonal nuances of the tabla. In this context, the bass drum serves as a counterpart to the bayan, enabling the rich, modulating tones to be emulated through innovative tuning and pedal techniques. Simultaneously, the snare drum captures the rhythmic and melodic subtleties of the dayan, which features a wide dynamic range, allowing for the expression of tabla bol through adept combinations of stick and snare methods, including rim shots, striking sticks together, and striking across the rim.

Rather than merely serving as a separate element, the hi-hat represents the independence of the drum, enabling the layering of rhythmic patterns that reflect the complex interaction of tabla strokes. It offers tonal textures perfectly compatible with jazz. By adapting and personalizing my drumming to align with the historical and conceptual importance of the Big Three, I aim to broaden its expressive potential. This method establishes a bridge between two rhythmic traditions, blending the unique characteristics of jazz drumming and tabla playing. It enhances their

creative potential in a hybrid context, which serves as the central theme of my thesis.

Thus, a jazz set typically features a variety of cymbals, including two rides, a crash, a china, a splash, and a hi-hat, combined with a minimal arrangement that consists of a snare drum, a bass drum, toms, and floor toms.

Incorporating tablas on the left side of the drum kit, along with small cymbals, could enhance the drummer's ability to blend traditional Indian sounds with jazz drumming. This hybrid approach would enable me to integrate Indian and jazz elements more seamlessly, providing greater improvisational freedom in hybrid textures. The decision to place the tabla in the hybrid drum set, particularly on the left side, reflects my conscious effort to maintain the *authenticity* of Indian classical music while simultaneously contributing to jazz, thereby bringing these two worlds closer together while preserving their distinct qualities. Finally, positioning the bayan on the left side allows me to play slides and incorporate the sounds needed for the repertoire I will perform.

I pay close attention to the drums' tuning; the tablas are set to F for the Bayan and D/Eb for the Dahina. A drum set with a lower pitch can also be advantageous, as it provides a deeper resonance that enhances the tonal characteristics of Indian percussion. This method honors the intricate dynamics of Indian rhythm and enhances the expressive, improvisational spirit of jazz.

While it may seem somewhat forced, choosing a hybrid set allows me to weave these Indian concepts into a jazz context, thus enhancing the overall sound of my intricate performance.

However, combining these techniques presents challenges. While it offers greater freedom of expression, it also requires skill in two different playing styles, all while maintaining clarity and consistency in execution. This can increase the complexity of the performance and open up new creative opportunities.

*Without deviation from the norm, progress is not possible*¹¹⁴.

(The Real Frank Zappa Book, 1989)

In creating this hybrid drum, I am not merely rearranging the instruments but reinventing the boundaries of rhythm, timbre, and cultural expression. This configuration symbolizes a broader artistic and intellectual quest: to foster a space where traditions can engage in dialogue rather than conflict, allowing the voice of the tabla to harmonize with jazz rhythms, and where rhythmic identities can thrive instead of fade. By modifying the drums to capture the subtle language of the tabla, my aim is to discover new musical grammars that transcend Eastern and Western influences, emerging from interaction, dialogue, and mutual respect between the two. This drum set is intended for playing, experimentation, and listening, ultimately cultivating a personal language that honors the complexities of both traditions.

¹¹⁴ He expressed this in a February 1971 interview on Dutch national television (VPRO-TV). In that conversation, Zappa stated: "Well, I think that progress is not possible without deviations. And I think it is important for people to be aware of some of the creative ways in which some of their fellow men deviate from the norm, because in some cases they might find these deviations stimulating and might suggest further deviations that might generate progress, you never know."

Chapter Three: Methodology, Application, and Orchestration

3.1 Introduction

Indian classical music is celebrated for its intricate and elaborate rhythmic frameworks, which play a central role in shaping its expressive depth and dynamic nuance. Within the tabla repertoire, forms such as *Kaida*, *Rela*, and *Laggi* are fundamental due to their distinctive contributions to the teaching, performance, pedagogy, and creative exploration of Indian classical music.

These forms are deeply rooted in the aesthetic and pedagogical principles of Hindustani classical music. Each one uniquely contributes to the development of a tabla player's improvisational vocabulary and structural understanding.

The importance of these forms lies not in reducing Indian classical music to a set of fixed structures but in highlighting how rhythmic knowledge is internalized and creatively reimagined. These compositions serve as living frameworks for improvisation. During performances, tabla players frequently expand, contract, and recombine these materials in real time, responding to both the tala's internal logic and the expressive demands of the musical moment. This improvisational fluidity exemplifies the interplay between structure and spontaneity, a defining trait of Indian rhythmic artistry.

Engaging with *Kaida*, *Rela*, and *Laggi* is methodologically crucial in the context of this research. In this section, I will investigate how the tabla vocabulary adapts to drums by illustrating the creative processes involved in rhythmic hybridization. Each section will provide a detailed examination of these adaptations, demonstrating how exact imitation, spontaneous creation, and independent improvisation can effectively apply to these traditional rhythmic forms. Integrating these methodologies opens up new possibilities for improving and considering jazz drumming more thoroughly by incorporating Indian rhythmic concepts, thereby promoting a deeper intercultural musical dialogue.

3.1.1 Adapting Kaida to the Drumset

Kaida is the most important *extendable composition* in a Tabla solo performance. In Indian music, *Kaida* denotes a structured rhythmic composition. It ranks among the most intricate forms of rhythm and serves as a foundation for improvisation. A *Kaida* features a clear structure with established rules and can be executed in different tempos and styles. This musical form intricately organizes rhythm, offering the percussionist guidance for both improvisation and rhythmic performance.

In India, the term *Kaida* signifies a rule, serving as a tool for vocabulary enhancement. Strict rules govern it, serving two primary purposes: teaching percussionists how to position their hands on the tabla and clarifying the mechanics of tabla language for learners.

As discussed in Chapter Two, drum practice typically involves basic exercises that are less engaging than *Kaida*, as they resemble musical compositions and functional drills. For a Western drummer, engaging with structured phrases such as *Kaida* can be particularly effective, as they offer a clear framework for developing technique through musical expression.

In this context, *Kaida* may be considered analogous to the role of rudiments in Western drumming traditions, such as the 26 standard rudiments codified by the National Association of Rudimental Drummers (N.A.R.D.). However, *Kaida* is more than a technical drill since it follows aesthetic and compositional rules that guide variation, development, and resolution. Without these principles, the form would lose its distinctive identity.

Historically, between the 12th and 18th centuries, approximately 20 to 25 core *Kaida* forms were established and have since become foundational to the tabla repertoire. These structures are still studied and performed today, serving as both pedagogical tools and artistic templates within the tradition.

The specific rules define *Kaida*'s essence; without these rules, it would not exist.

For example, the *Kaida* always ends up with *Tina Kina* and *Dhinna Ghina* patterns.

Example: Teentaal

Dhati Dhage Nadha Tirkit | DhatiDhageTinnaKinna |

x | 2

Tati Take Nata Tirkit | DhatiDhageDhinnaGinna ||

O¹¹⁵ | 4

Regarding its structure, *Kaida* is played and designed in eighth notes. It comprises *Tali* and *Khali* (male and female parts, i.e., male = guttural sound, female = palatal sound).

Every *Kaida* has variations, i.e., the *Paltas*, combined with the *Kaida*, allowed the tabla player to broaden the composition, i.e., *Paltas* + *Kaida*, thus 8 bars + 8 bars.

Furthermore, the presence of *Tihai* is used to close the cycle.

Paltas, as systematic variations of a *Kaida*, adhere to strict traditional rules. One of the most common initial *Palta*, the *Douhra*, typically involves repeating the first two lines of the *Kaida* twice. Following this, the *Kaida* progresses from the beginning down to the *Khali* (the empty or unstressed beat), maintaining the same pattern.

These variations are essential for technical development and understanding how a *Kaida* unfolds over time. They demonstrate the form's compositional logic and internal coherence, revealing how creativity operates within a disciplined framework. Through *Paltas*, the performer explores the expressive potential of the original theme while maintaining fidelity to its formal rules.

For tabla players, the *Kaida-Paltas* showcase their technical skills in articulating the *bol* and swiftly managing and modifying *bol* patterns across different *talas*.

Similar to drummers¹¹⁶, tabla players learn *Kaidas* and their *Paltas* sequentially, including the study of solo transcription.

¹¹⁵ Khali

¹¹⁶ I'd like to clarify that when I say "drummers," I'm referring to drummers in general, not necessarily those who want to explore rhythmic crossover. In my thesis, I mentioned including a tabla on the left side of the set, but that only serves my purpose during the performance.

Kaida serves as a foundational pedagogical form in tabla training, providing a structured yet adaptable framework that fosters improvisational development. By engaging with *Paltas*, tabla players cultivate a deeper, intuitive, and analytical understanding of how to improvise within formal constraints. This process parallels the use of solo transcriptions in drum set pedagogy, where analyzing pre-composed material enhances creative fluency and technical precision. This particular composition is significant because it integrates both the core *Kaida* and its accompanying *Paltas*, providing insight into the form's internal logic and expressive potential. As performers engage with various *Kaidas* and their associated *Paltas*, they become more fluent in the rhythmic language and compositional strategies of the tabla tradition.

In solo performance contexts, a *Kaida* is typically presented at a slower tempo and then immediately restated in *dugun* (double speed). It is at this increased tempo that the *Paltas* are performed, demonstrating both control and creativity. Unlike other compositional forms such as *Tukra*, the *Kaida* itself does not traditionally include a *Tihai*. However, the performance usually concludes with a *Tihai* constructed from motifs within the *Kaida*, often extending over one or more full cycles of the *tala*. This final gesture reinforces the performer's mastery of form and rhythmic resolution (Diethrich, 1995: 50).

The concepts of *Kaida*, *Rela*, and *Laggi* can profoundly influence contemporary drummers looking to expand their rhythmic vocabulary and technical skills. As a drummer, I can use the *Kaida* approach to develop complex rhythmic variations based on a simple theme. This method can create extended drum solos or complex rhythm sections within a band setting. By practicing *Kaida*, I can enhance my improvisation skills and gain a deeper understanding of rhythmic structure and variation.

A *Kaida* composition, based on theme and variation principles, provides a structured yet inventive way to approach rhythm, significantly improving a drummer's repertoire. The process starts by establishing a fundamental theme or fixed pattern, which is further developed through systematic variations, enhancing technical and improvisational abilities.

To implement *Kaida* on the drums, I select one of the *Teentaal Kaida* (Fig.22) and distribute it across the required limbs according to the *bols* of that phrase.

Therefore, as described in the legend, I pay attention to the sound of the syllables played on the drums. As previously observed, several possible

circumstances exist. What I aim to create is an indicative example that respects both the rhythmic and melodic aspects. I will also adhere to the same parameters when introducing the *Dorha* (Fig. 23).

Teentaal Kaida:

Dhati Dhage NaDha Tirakite|
 x
 Dhati Dhage Tinna Kina |
 2
 Tati Take NaDha Tirakite|
 0
 Dhati Dhage Dhinna Gina ||
 4



Fig.22- *Teentaal Kaida*

Paltas, in general, and the compositions from which they derive, can be explored rhythmically by adding accents and various rhythmic patterns, such as triplets, sixteenths, rests, and agogics, as well as moving specific notes in the composition. These combinations enable an in-depth exploration of the thematic material, fostering the development of new ideas while remaining faithful to the original motif. In this case, I will transcribe the first *Palta*, *Dorha*, which means "double" or "repeated", following the notes in the legend.

A *Dohra Palta* typically follows this structural rule: the first two lines of the original *Kaida* are repeated twice, forming the foundation of the variation. This repetition is intentional; it reinforces the basic motif of the *Kaida* in the memory of both the listener and the performer, creating internal symmetry and a sense of balance within the rhythmic structure.

The *Dohra Palta* is often taught early in the *Kaida* learning process because it helps students, including tabla players, recognize and manipulate motif cells without breaking stylistic rules. Thus, we see how

tradition supports creativity and how improvisation in tabla arises from structured development rather than free invention. The following example is written in 4/4 bars, despite being from a 16-beat cycle. This choice was made for practical reasons, primarily to optimize space on the score and improve clarity for readers more familiar with Western notational conventions.

Teentaal Kaida, Paltas Dorha: (double speed)

DhatiDhage NaDhaTirakite DhatiDhage NaDhaTirakite|
x
DhatiDhage NaDhaTirakite DhatiDhage TinnaKina |
2
TatiTake NaDhaTirakite TatiTake NaDhaTirakite |
0
DhatiDhage NaDhaTirakite DhatiDhage DhinnaGina ||
4



Fig.23 - Dorha Palta

If applied in a jazz context, a basic swing pattern on the ride cymbal can serve as a starting point, incorporating the hi-hat on beats 2 and 4 as part of the pattern. Adding the *Kaida* and its variations as accompaniment involves interaction with the kick and snare, the entire kit, and the pattern played by the cymbals. (Fig. 24)



Fig. 24 - Kaida applied to a swing pattern

For the overall context, one can progressively introduce more complex variations to the basic swing pattern in line with the soloist's phrasing. These criteria establish a dynamic and engaging dialogue, thereby enhancing the overall musical experience.

Hence, applying the methodology described in the previous chapter, using *Kaida*, *Rela*, and *Laggi* to analyze the drums in a jazz context, following De Poli's methodology, implies an analytical and structured approach. This approach involves analyzing measures and performance through personal improvisation, offering a comprehensive framework for integrating traditional Indian rhythms into jazz drumming.

For *Kaida*, I analyze the composition by breaking it into individual measures, focusing on the specific *bols* and their positions within the rhythmic cycle. This involves mapping the central theme and its variations and observing how the rhythm changes over time. I then generate spontaneous variations that reflect the traditional improvisational style of tabla players.

Additionally, as another option, I can assign different drums and cymbals to distinct *bols*, creating a complex rhythmic texture while preserving the essence of the original composition.

Bailey's approach emphasizes the importance of improvisation in musical practice, distinguishing between idiomatic and non-idiomatic improvisation.

Idiomatic improvisation is characterized by its strong connection to a particular musical tradition, relying on its established language and conventions. In relation to *Kaida*, when I improvise in a jazz context, I draw on these learned kaida variations as a foundation to stay within the idiomatic boundaries of Indian rhythmic patterns while engaging with jazz's harmonic and melodic features.

In contrast, non-idiomatic improvisation refers to improvisation that isn't confined by the specific rules or language of a particular musical tradition. This approach utilizes the principles and structures of *Kaida*, *Rela*, and *Laggi* as a foundation for more experimental and innovative expressions. Consequently, it involves altering the phrasing, dynamics, or orchestration of the *Kaida* in ways that move away from traditional practices, such as creating polyrhythms or exploring unusual time signatures. These elements are then integrated into a free jazz context, where the rigid structures of the original form become more fluid and flexible.

Nettl's methodology makes a significant contribution to this process. It emphasizes the importance of deconstructing musical elements into smaller, manageable units, committing them to memory, and subsequently utilizing these components to cultivate new expressions and strategies for composition and improvisation.

As a result of this deconstruction, it becomes considerably easier to internalize the rhythmic language of *Kaida* and to employ these patterns in performance. By committing these smaller units to memory, one can establish a repertoire of rhythmic phrases that can be utilized during improvisation. For instance, during a jazz solo, the drummer may commence with a well-known *Kaida* pattern, introduce variations and transitions derived from *Rela* sequences, and incorporate repetitive *Laggi* phrases to construct a cohesive and dynamic rhythmic narrative.

Ultimately, the Schippers' methodology seeks to enhance the learning process of improvisation through stages of precise imitation, spontaneous creation, and independent improvisation, thereby facilitating the gradual development of skills and creative expression.

The concluding phase, independent improvisation, necessitates the utilization of the acquired patterns as a foundation for entirely original and spontaneous musical expressions. This process involves the generation of wholly new variations and themes, progressing from precise

imitation to spontaneous creation and ultimately culminating in independent improvisation, while developing a comprehensive understanding of *Kaida*, *Rela*, and *Laggi*, as well as their application in a jazz context on the drums.

3.1.2 Adapting *Laggi* to the Drumset

Laggi is a unique rhythmic style found in the tabla repertoire, often connected to semi-classical music, folklore, and religious traditions. It features complex, rapid, and repetitive patterns played on the tabla. *Laggi* can be integrated into various musical forms, whether in improvisations or structured formats, such as *Kaida*.

These elements are deeply rooted in the tabla tradition and are commonly present in solo showcases and elaborate compositions of Indian classical music. They play a crucial role in a tabla player's training and represent a refined and sophisticated art form within Indian music.

Laggi adds rhythmic dynamism by introducing complex and fast movements, enhancing the performance's variety and intricacy, and enriching the expression spectrum. It is typically brisk, characterized by rhythmic phrases that are repeated with subtle variations.

The approach involves establishing a groove and improvising upon it. In the context of the bayan, the ostinato is played while the *dahina* elaborates on the improvisation.

When this same principle is applied to the drums, specifically, improvisation can be generated based on an ostinato as a reference, utilizing a maximum of three limbs. The improvisation can exhibit both rapid and slow tempos, with its distinct characteristic being the maintenance of its developmental arc.

It is noteworthy that tabla players draw a comparison between the *laggi* concept and the blooming of a flower. The flowers progress from the bulb to full bloom within three minutes. For instance, one begins with a groove and continues to develop it until culminates in a *Tihai*. Consequently, the groove is articulated by the left hand, while the information, specifically the improvisation, is expressed by the right hand.

While playing, the performer can mix his bol patterns, creating a new accent pattern. Suppose the pattern *GHINA TIDHA*, for example, becomes *TIDHA GHINA*, which is maintained for several cycles. In that case, the listener, if not the musicians themselves, tends to change the structure of

the bol to *DHIGHE NATI*; however, this pattern may seem inappropriate to the tabla player.

The stroke density will remain consistent for the entire pattern, depending on the division.

The slight deviation from this rule occurs in 2 forms:

- 1) One division unit will be divided into 2. This form only happens with closed bols *TITA*, *TIRAKITA*, *KA*, and *TAKA*;
- 2) Two division units will be combined into 1. This form only occurs with the open bols *DHA*, *DHIN*, and *GE*.

In the example above, the primary accented characters reflect the significant stroke possibilities of the tabla's ancestor, the pakhavaj: *DHA*, *TA*, *DHI*, and *NA*. The core *TETAKATA GADIGANA* is purely pakhavaj and functions as a cadential formula. (Stewart 1974:130-139,145)

The *Laggi* is characterized by its playful, decorative phrasing, which is designed to embellish the groove of the Keharwa cycle¹¹⁷ (Fig. 25). It is often performed with expressive dynamics and ornamentation, enhancing the mood of the main composition it accompanies.

Laggi is traditionally associated with lighter taals, such as Keharwa or Dadra, and is played at a medium to fast tempo.

So I'm going to apply *Laggi* (Fig. 26), respecting the cycle of *Keharwa Tala* (8 beats: 4 + 4)

Dha Ge | Na Ti | Na Ka | Dhi Na ||
 1 2 3 4 5 6 7 8
 Tali Khali



Fig. 25 - Keharwa tala

¹¹⁷ This is the most popular light taal, used in Bollywood songs, folk music, and semi-classical forms like Thumri and Ghazal. Its groovy, cyclic feel lends itself well to Laggi variations.

Laggi:

Dha - Ge Na | Ti Na KiTa |
Dha - Ge Na | Ti Na KiTa ||

Na Tin Tin Na | Dhin Na KiTa |
Na Tin Tin Na | Dhin Na KiTa ||



Fig. 26- Laggi on *Keharwa Tala*

Regarding applying *Laggi* on drums, I decided to target an ostinato and play improvisation on top of it, ending with GadhiGanedha as a resolution phrase. Below, I provide examples of *Laggi* to showcase its varied interpretations, expressed through different rhythmic values that emphasize its versatility and expressive range. (Fig. 27)

Dha - Ti Dha | GadhiGanedha Na - |
1 2 3 4 5 6 7 8
Tali Khali

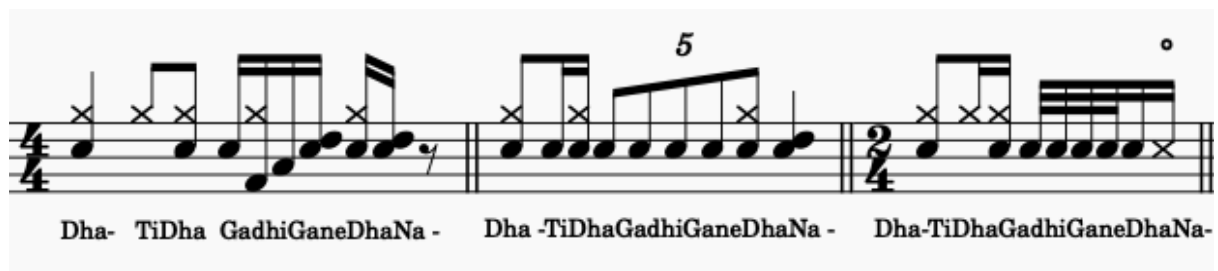


Fig. 27 - Laggi interpretation

At this stage, it is necessary to provide a detailed explanation of the following concept to clarify its interpretative meaning:

Dha - Ti Dha gives a strong, groove-establishing opening.

GadhiGanedha is a stylized phrase that creates playful syncopation.

Na - serves to land and complete the phrase with space.

Therefore, the specific rhythmic phrases utilized in tabla can be applied to drums, adhering to the parameters and methodology I will explain later.

In a jazz context, a *Laggi* pattern can create tension during a solo and revert to a more traditional swing pattern once the solo has concluded. This approach produces a dynamic flow, enriching the overall musical narrative.

Thus, per the methodologies previously outlined, I will address them based on the insights of relevant ethnomusicologists. As previously mentioned, all these methodologies are designed to foster creative expression and enhance technical and mnemonic skills.

De Poli's improvisational approach centers on engaging with repetitive phrases within a jazz framework, allowing *Laggi* patterns to interact dynamically with fellow musicians. This interaction fosters a rhythmic dialogue, embodying the spontaneous and responsive character of jazz. By exploring various tempos, accents, dynamics, rhythmic figures, and orchestrations, I can tailor the patterns for a jazz ensemble, enriching the performance with distinct rhythmic elements and unlocking new creative pathways.

When applied to drums in a jazz setting, this method begins with a careful analysis of the rhythmic structure. It is followed by an improvisational practice that adjusts these patterns to the drums' technical strengths and capabilities. This approach also fosters a more profound and nuanced understanding of the rhythmic intricacies inherent in these traditional Indian compositions.

Continuing on the theme of improvisation, let's remember that Bailey's methodology focuses on idiomatic and non-idiomatic improvisation.

Its repetitive nature is well-suited to idiomatic improvisation in a jazz context. Therefore, it's beneficial to practice the key patterns below, ensuring they capture the essence of the rhythmic cycle and its dynamic interplay. This establishes a compelling rhythmic foundation that supports solos and enhances the overall structure of the performance.

For instance, non-idiomatic improvisation may involve dismantling repetitive phrases and reassembling them in a novel and innovative way. This approach is part of an experimental process, allowing me to try various tempos, dynamics, or orchestrations, forming patterns that unpredictably engage with the harmonic and melodic aspects of the jazz ensemble.

Conversely, Nettl advocates for dissecting the pattern into its essential phrases to help the practicing drummer grasp how these patterns relate to different musical components. This technique serves as a helpful foundation for improvisation.

Ultimately, Schippers' approach highlights the stages of learning improvisation: precise imitation, spontaneous creation, and independent improvisation. In spontaneous creation, you can explore repetitive phrases while incorporating dynamics, tempo, and orchestration changes. This practice can foster creative methods for applying *laggi* models in collaboration with other musicians in a jazz context. Conversely, independent improvisation utilizes repetitive phrases to establish fresh grooves and rhythmic bases.

3.1.3 Adapting *Rela* to the Drumset

In the tabla tradition, a *Rela* is a lively and fast-paced composition highlighting the performer's technical skill and rhythmic precision. *Rela* translates to "torrent" or "flow" in Hindi, aptly capturing its essence: an uninterrupted, flowing sequence of syllables that generates a rhythmic pulse. In contrast to other compositional forms, such as *Kaida*, which adhere to strict rules of variation and structure, the *Rela* tends to be more fluid, emphasizing speed and density over formal symmetry.

Usually performed at the peak of a tabla solo, a *Rela* initiates with a central theme that evolves through swift variations. These variations often consist of recurring *bol* patterns, such as *Dhere Dhere Kita Taka* or *Tita*

Taka Tita Taka, played continuously, adding excitement and intensity. The repetitive aspect of these phrases creates a rolling rhythmic motion, captivating both the listener and the performer with its momentum.

What distinguishes the *Rela* is not just its rapidity, but also its precision. Despite being played at a high tempo, each *bol* must be executed clearly and accurately, presenting a true challenge. Typically, a *Rela* ends with a *Tihai*. This rhythmic phrase is repeated three times and resolves on the *Sam*, providing a sense of closure and structural harmony following the whirlwind of variations.

In performance, the *Rela* is a striking, often climactic segment used to demonstrate not only a tabla player's command of rhythm but also their expressive capabilities. It encapsulates power and finesse, making it one of the most exhilarating components in the tabla repertoire.

Rela offers a more accessible approach to rhythmic playing. It is characterized by its rapid, rhythmic movements, which can be viewed as an improvised rhythmic phrase. This allows percussionists to showcase their skill in executing fast and intricate rhythms, adding a layer of virtuosity to their performances.

Typically, a *Rela* consists of a 4-bar or 8-bar composition composed of 16th or 32nd notes that form this essential rudiment. It introduces a unique atmosphere and theory of improvisation, making it a swift and effortless creation. The *Rela* can be applied to any *tala*, regardless of *matra* duration.

The *Rela* is structured into two sections, with the first section being repeated. Each section includes subgroupings that often vary in length, despite a noticeable quadratic structure in many instances.

Since a *Rela* or group of related notes is often played for several consecutive cycles, the combination of accents and bols can make these patterns sufficiently coherent to more than counterbalance that of the *taal*.

Concerning the bols used are as follows:

1-shot cores: *Dha (ta)*, sometimes *Dhin (tin)*, *tite*, or *kata*.

2-stroke bols (the duration of 1 stroke must be equal to or greater than that of the *Rela* pair of strokes): *Dhin-na-*, *tina-*, *dha-ge- (ta-ke-)*.

There is one core of stroke pairs: *Dhage (taka)*, *Ghina (kina)*, and *Tita* (a pair of hand or finger strokes).

Cores with 2, 3, or 4 pairs of traits: *Tirakite, Kitetake, Tirakitetake, takeTirakitetake, DhireDhire, DhireDhirekitetake, Ghiranaga, Dhinagina, Dhatigina, Dhiganaga (Tiganaga)*.

The *bols* strokes above can be combined almost any way, but they are rarely broken down into components. (Stewart 1974:149,151-154,159)

Rela usually ends with the phrase *Tinna Kitetake* and *Dhinna Kitetake*.

The *Rela* I discuss here is derived directly from Kaida; they truly share the same *bols*.

Example: *Rela* on *Teentaal*

Dha-tira kitetake dheradhera Kitetake|

1 2 3 4

Dha-tira kitetake Tin-na- Kitetake

5 6 7 8

Ta-tire kitetake teratera Kitetake|

0¹¹⁸ 10 11 12

Dha-tira kitetake dhin-na- Kitetake |

13 14 15 16

Incorporating *Rela* into drumming enhances a drummer's technical skills and creative expression.

¹¹⁸ Khali

Therefore, being known for its rapid, fluid sequences and complex patterns, Rela is suitable for soloing or fill phases in drum phrasing. Its aim is to create a seamless and continuous flow of notes, often emphasizing uniformity and clarity.

Examples of adaptation include playing *Rela* at specific drum points, such as the snare drum, to emphasize rhythm before integrating it across the kit, while also considering the melodic aspect.

Adding accents to particular notes in the pattern generates dynamic variations. Even basic drumming rudiments, like *paradiddles* and *double stroke rolls*, assist in executing the *Rela*. Moreover, incorporating the bass drum to complement hand patterns enhances the overall phrasing effect.

In the following example (Fig. 28), I present a Rela composed in Teentaal, constructed around the phrase *Tirakitetaka*, which is emblematic of this compositional form's rapid and flowing articulations.

As demonstrated, the *Rela* emphasizes the intrinsic strokes and accents of *Teentaal*, maintaining its structural integrity while fulfilling its compositional and expressive role. In doing so, the *Rela*'s performance continuously reaffirms the tala, reinforcing its cyclic nature through dynamic variation.

Rela Tirakitetaka on Teentaal:

dha-tirakitetaka **dhin**-tirakitetaka **dhin**-tirakitetaka **dha**-tirakitetaka

1 2 3 4

dha-tirakitetaka **dhin**-tirakitetaka **dhin**-tirakitetaka **dha**-tirakitetaka

5 6 7 8

dha-tirakitetaka **tin**-tirakitetaka **tin**-tirakitetaka **ta**-tirakitetaka

9 10 11 12

ta-tirakitetaka **dhin**-tirakitetaka **dhin**-tirakitetaka **dha**-tirakitetaka

13 14 15 16



Fig.28 - *Rela Tirakitetaka* on *Teentaal*

The context of jazz frequently features significant interaction and improvisation, making *Rela* a great means to enhance texture and virtuosity. During a drum solo, phrases can emerge to create a rapid and smooth flow of notes. Incorporating pauses and polyrhythms is also recommended. Indeed, De Poli suggests that this improvisational approach can be deepened by adjusting dynamics and accents, which adds richness and intricacy to the performance.

In idiomatic improvisation, taking up Bailey's methodology, the technique involves accurately replicating the fast and intricate phrases characteristic of the *Rela*. In a jazz setting, these *Rela* phrases can be incorporated into solos or accompaniment patterns, adding a layer of rhythmic complexity and excitement.

Meanwhile, for non-idiomatic improvisation, it is beneficial to experiment with quick phrases in unconventional ways, transcending traditional rhythmic structures.

This practice might involve extended techniques, such as using different parts of the sticks, incorporating electronic effects, or even fusing *Rela* patterns through rhythmic assonance with rhythms from other traditions, like jazz.

As mentioned, Nettl's methodology emphasizes the importance of breaking down musical elements into smaller units, memorizing and internalizing them, and then using these blocks to develop new expressions and strategies for composition and improvisation in performance.

Then, by practicing short pattern segments of the *Rela*, the internalization of the rapid and intricate movements that define this composition becomes more rapid and complicated.

Schippers, known for his spontaneous creativity, explores rapid patterns in diverse musical contexts. For me, this involves blending *Rela* phrases with various jazz rhythms or using them to create tension and resolution in a solo.

Ultimately, this process leads to the development of a cohesive rhyme structure, enabling me to smoothly incorporate and adapt traditional forms into my improvisation after a deep understanding of them.

3.1.4 Adapting Tihais to the Drumset

The *Tihai* is a key compositional and improvisational element in Indian rhythm, acting as a structural and expressive feature. It comprises a phrase repeated three times, culminating at a specified point, known as the *Sam*. While its execution follows a stringent mathematical structure, its use allows for a surprising amount of flexibility, making it a captivating rhythmic tool in Indian classical music and Western improvisation.

Since I focus on the rhythmic intersections between tabla and drums, I will dedicate a section to the *Tihai* to showcase its potential beyond traditional applications. The charm of this instrument lies in its dual nature: It is both structured and highly adaptable, facilitating rhythmic flexibility that dynamically interacts with various metrical patterns. By examining its application in Indian classical music and jazz, I aim to highlight its versatility and innovative capacity in shaping musical phrasing.

In Hindustani classical music, a *Tihai* is commonly used as a cadential device to signify the conclusion of a phrase, a section, or an entire performance. It is present in tabla solos, instrumental compositions, and vocal pieces. It provides a rhythmic resolution that creates tension through repetitive cycles, releasing energy on the *Sam*. This symmetrical repetition imparts a sense of purpose and cyclicity, reinforcing the tala's structural framework.

Despite this structured form, performers manipulate the *Tihai* in various ways by changing subdivisions, spacing the repetitions differently, or adding micro-variations in timing to introduce expressive nuances.

Indian classical musicians regularly employ *Tihais* of varying lengths, adjusting them to accommodate different talas. Complicated *Tihais* often require advanced calculations to ensure the phrase concludes accurately on the *Sam*, highlighting the performer's rhythmic skill¹¹⁹.

Therefore, I intend to utilize this cadence as a cross-cultural rhythmic device in my thesis, as its adaptability makes it a valuable rhythmic tool in jazz and contemporary improvised music. As I wrote in the previous chapter, Western drummers and improvisers have found in the *Tihai* a means to explore polyrhythms, metric modulations, and phrasing techniques that expand beyond traditional Western rhythmic structures. When transposed into a jazz context, its repetitive nature can create compelling phrasing that challenges the listener's perception of time while maintaining a clear structural resolution¹²⁰.

The capacity of *Tihai* to integrate diverse rhythmic traditions is attributed to its structural predictability, complemented by its interpretive flexibility. While Western cadences typically adhere to harmonic progressions for resolution, *Tihai* offers a rhythmic counterpart, providing a method to conclude phrases through repetition and rhythmic tension.

In my creative process, I have examined the adaptability of *Tihai*, illustrating its capability to encompass varying numbers of beats while maintaining its essential tripartite structure. Below, I will present this through examples of *Tihai*, ranging from one to six beats (Fig. 29), demonstrating their efficacy in diverse rhythmic contexts while adhering to their defining principles.

¹¹⁹ Famous tabla players like Alla Rakha and Zakir Hussain have performed *Tihais* with intricate internal divisions, demonstrating their capability to expand and contract within metrical boundaries while maintaining structural coherence.

¹²⁰ For example, in John McLaughlin's collaborations with Zakir Hussain and Shakti, *tihai* are inserted into complex odd-meter compositions as transitions between sections or as climactic moments in improvisation. Similarly, jazz drummers such as Trilok Gurtu have seamlessly incorporated *tihai* into their solos, adapting its structure to fit a groove-oriented context while retaining its mathematical precision.

1 beat Tihai



2 beat Tihai



3 beat Tihai



4 beat Tihai



5 beat Tihai



6 beat Tihai



Fig. 29- Examples of one to six beats Tihai

This approach emphasizes the essential tension between constraint and freedom, a central theme in both traditional and contemporary *Tihai* applications. By varying the placement, subdivision, and spacing of repetitions, I aim to demonstrate how *Tihai* can be adapted to accommodate different tempos and rhythmic structures, thereby creating a dynamic interplay between stability and fluidity.

This experimentation demonstrates that, rather than being a rigid formula, it constitutes an adaptable rhythmic principle that can serve as a bridge between traditions, facilitating innovation while respecting its origins. Whether in Indian classical music, contemporary jazz, or my rhythmic explorations, it is a testament to the dynamic possibilities of rhythmic cadence.

In my daily practice, I have implemented *Tihai* in various ways: typically, as a resolution or conclusion to a cycle, and in other methods, such as contextualizing and layering them within a groove as phrasing. For example, I may sustain an ostinato on the ride while articulating the cadence on the kit with my left hand. Furthermore, I utilize it for metric modulation and temporal illusions by employing shifted resolutions, wherein the *tihai* resolves at an unexpected point rather than at the anticipated downbeat, initiating a *tihai* in one subdivision but shifting it midway or to a different rhythmic subdivision (for instance, from triplets to sixteenths).

Also, it would be helpful to use a phrase in a sixteenth-note triplet as a mnemonic device to remember that various rhythmic figures can be used to construct a *Tihai*. The only principle is to honor the essence of the *Tihai* itself. (Fig.30)

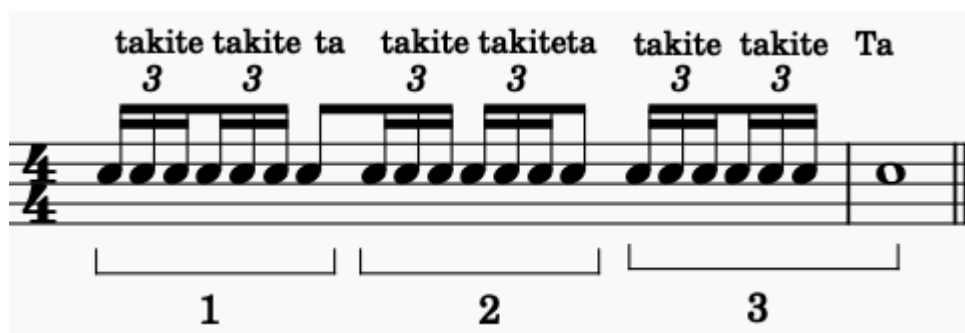


Fig.30 - sixteenth-note triplet Tihai

As a result, its flexibility has enabled its broad use in modern fusion and jazz settings, where its mathematical precision and cyclical qualities facilitate the creation of creative rhythmic patterns. Hindustani musicians like Trilok Gurtu, Zakir Hussain, and V. Selvaganesh have seamlessly blended this rhythmic flow into their collaborations with jazz artists, demonstrating how this cadence transcends the conventional boundaries of Indian classical music.

I propose constructing a *Tihai* based on the *Kaida* *DhatiDhagenaDha Tirakite* within the Teentaal framework to explore the compositional potential contained within the traditional tabla repertoire. The *Tihai* will be built on a condensed motif extracted from the original *Kaida*, specifically the phrase **Dha - ti - Dha -** (Fig. 31) and repeated thrice with metrically calculated gaps to end precisely on the *Sam*. This exercise demonstrates how traditional material can be reinterpreted and adapted for cadential resolution, while maintaining rhythmic integrity and structural coherence.

Tihai applied on the *Kaida* *DhatiDhagenaDha Tirakite* in *Teentaal*:

Dhatidhage NadhaTirakite Dhatidhage TinnaKina

Dha - ti - Dha - Dhati DhageNadha TirakiteDhati

DhageTinna Kina **Dha - ti - Dha -** Dhatidhage

NadhaTirakite Dhatidhage TinnaKina **Dha - ti -**

Dha

Fig.31 - *Tihai* applied on the *Kaida* *DhatiDhagenaDha Tirakite* in *Teentaal*

Below, I will present two examples of *Tihai*, one from drummer Dan Weiss and the other from multi-percussionist Trilok Gurtu.

Dan Weiss, a drummer with a strong background in tabla, seamlessly integrates *Tihai* into his performances. His albums *Timshel* (2011) and *Utica Box* (2018) exemplify the application of tabla phrasing on drums, using *tihai* as a core rhythmic concept rather than just an embellishing cadence. Weiss's seven-beat *tihai*, featuring its shifting resolutions and structured cyclic phrasing, demonstrates how *Tihai* can be an integral component of improvisational language.

Dan Weiss frequently employs seven-beat *tihai* in his drumming, directly reflecting his tabla training.

I will include the formula below. The phrase used is *DhaGeNa DhaGeNaDha*, with a resolution on the Sam and a Teentaal, making it 16 beats long.

I will help myself with the math:

Phrase Length (X) $\times$ 3 + Gap (Y) = Cycle Completion.

In a seven-beat *Tihai*, X = 7, meaning the repeated phrase takes up 7 beats.

So:

Phrase (X) = 7 beats repeated 3 times = 21 beats

Gap¹²¹ (Y) to be solved on beat 1 (Sam) = 11 beats (3 gaps + 8 beats)

Total cycle (21 + 11) = 32 beats (two teentaal cycles)

A written example of the two cycles, *Teentaal* + the *Tihai*: (Fig. 35)

¹²¹ Gap (4 beats of which one is the resolution on the Sam).

Dha Dhin Dhin Dha
Dha Dhin Dhin Dha
- Dha Ge Na
Dha Ge Na Dha

- Dha Ge Na
Dha Ge Na Dha
- Dha Ge Na
Dha Ge Na Dha | -¹²²

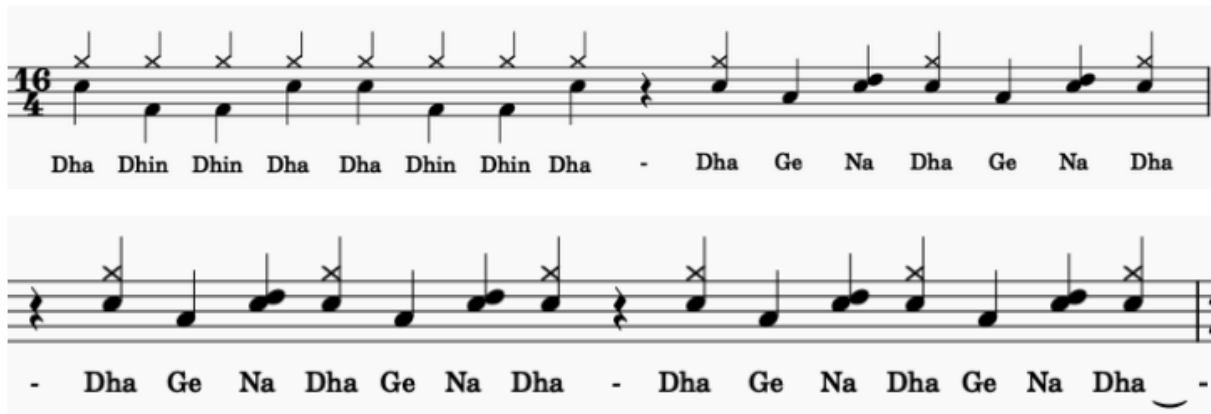


Fig. 35 - *Teentaal* + the *Tihai*

The specific term can be used to execute double time in a teentaal cycle, resulting in two movements for each beat. Below is an example that includes the *Tala* and *Tihai*, along with the corresponding score. (Fig. 36)

It is essential to note that, while maintaining the formal integrity of both the tala cycle and the *tihai* structure, rhythmic values may be adjusted and ornamental variations may be introduced. Such modifications remain at the aesthetic discretion of the performer or composer, in line with the interpretative flexibility that characterizes much of the Indian classical tradition.

Dha Dhin Dhin Dha
Dha Dhin Dhin Dha
-Dha GeNa DhaGe NaDha
-Dha GeNa DhaGe NaDha
-Dha GeNa DhaGe NaDha| -

¹²² Sam.

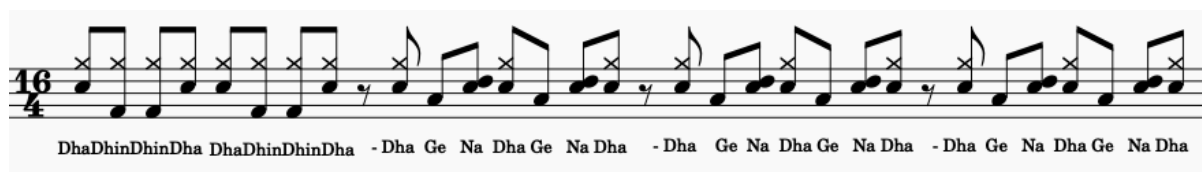


Fig.36 - Tihai applied on Teentaal tala

Trilok Gurtu's method is firmly grounded in classical Indian rhythmic traditions, yet it innovatively adapts to drum sets and hybrid percussion setups. Unlike tabla players, who typically execute that within the confines of a tala cycle, Gurtu employs the tihai concept across diverse time signatures and groove-oriented contexts, rendering his approach notably dynamic.

In "Once I Wished a Tree Upside Down" (1993), the *Tihai* is integrated alongside tabla strokes and drumming elements. Gurtu employs a tihai pattern that features ghost notes on the snare drum, bass drum accents, and open hi-hat phrases, all of which contribute to a cohesive groove. He often employs a triplet-based *Tihai* in this track, such as *DhaTiDhaTiDha* (x3), which leads to Resolution.

While the track's basic groove is based on a 12-bar cycle, Gurtu structures his *Tihai* using a triplet-based phrase that creates a 3-over-4 feel. The phrase's total length is 4 bars, which he repeats three times. However, his phrase momentarily alters the perception of the time cycle before returning to the central groove.

Gurtu adheres to the traditional (X X X)¹²³+ gap = *Sam* structure of a *Tihai*, but manipulates it as follows:

Each cycle of the *Tihai* lasts 4 beats.

It is played three times in succession, totaling 12 beats.

There is a gap of 4 beats before resolving to *Sam*.

Then, the complete *Tihai* extends for 16 beats before reaching its resolution.

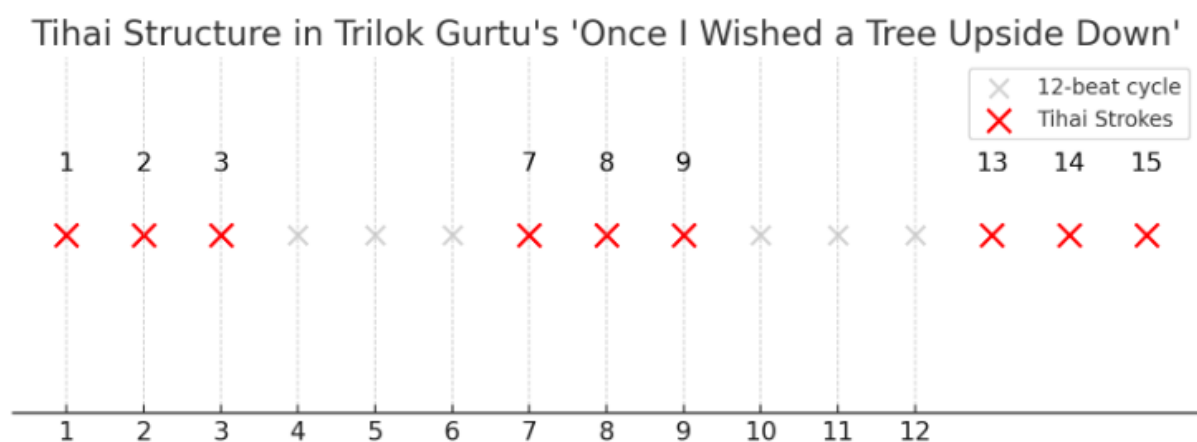
Gurtu flexibly alters the *Tihai* using various percussion instruments, setting it apart from conventional tabla styles. In the first repetition, the dynamics are gentle, echoing tabla-influenced phrasing. He employs high

¹²³ Tihai

toms and the snare to replicate the tabla's dayan-bayan articulation. The intensity increases in the second repetition with the addition of low toms and the bass drum, adding to its depth. Syncopation is emphasized through off-beat accents.

The third repetition is orchestrated over the complete drum set, using hi-hats and cymbals to create dynamic contrast. The bass drum reinforces rhythmic phrasing and provides clarity in the groove.

Below is a graphic transcription of the example:



This graphic representation showcases Trilok Gurtu's *Tihai* from "Once I Wished a Tree Upside Down," set within a 12-beat cycle (Ektaal or Chautaal). The red dots indicate the repetitions of the *Tihai* phrase, which is played three times before resolving to *Sam*, the cycle's first beat.

The *Tihai* uses a traditional structural approach where a brief rhythmic phrase is repeated three times, effectively building anticipation before reaching a powerful resolution. Gurtu's phrasing often features dynamic interaction between tabla strokes and drumming, enriching the piece with syncopation and groove layers.

In conclusion, exploring the limits and versatility of *Tihai* highlights its significance beyond classical roots, positioning it as a universal rhythmic idea that transcends cultural divides. In Indian classical music, it offers structural coherence and resolution, whereas in jazz and contemporary drumming, it demonstrates its adaptability and expressive capabilities. Whether utilized in tabla performances, jazz improvisation, or blended

drumming techniques, the tihai acts as a vital instrument for rhythmic discovery, underscoring the deep connection between structure and creativity.

Chapter Four: Jazz Applications and Reflections

This chapter centers on two main themes: the application of previously mentioned techniques to jazz performance, and the challenges of cross-cultural rhythmic concepts.

It explores both the practical and conceptual aspects of integrating rhythmic techniques from tabla and Hindustani music into jazz, ensuring that prior work can be effectively applied.

Lastly, it examines these three related themes to thoroughly analyze the possibilities and intricacies of merging tabla-inspired rhythmic principles with jazz drumming, emphasizing the creative opportunities this fusion presents while critically assessing its implications for both musical traditions.

In the first section, I explore jazz techniques that broaden the expressive range of jazz drumming and foster new rhythmic dialogues between diverse traditions.

Section two evaluates these methods along with their cultural implications. By incorporating expert insights, it highlights considerations of feasibility, authenticity, and effectiveness, thereby anchoring the thesis in both practical application and theoretical coherence, facilitating a thorough understanding of integration.

Lastly, the chapter tackles the challenges posed by cross-cultural concepts, focusing on topics such as authenticity, appropriation, and cultural fidelity. Although adapting techniques from various traditions can offer enrichment, it also presents considerable challenges in translating idiomatic rhythms into different contexts, highlighting the need for further exploration and development.

4.1 Application of Adapted Techniques to Jazz Repertoire

This section shifts from theory to practical implementation. It highlights the historical, pedagogical, and philosophical links between Indian classical music and jazz, illustrating how these insights can shape performance strategies within a jazz context. Expanding on prior discussions, this chapter explores how modified Indian techniques can enhance the expressive capabilities of contemporary jazz musicians. The techniques discussed here include adapting tabla bols articulations for drums, as previously outlined.

Additionally, this section revisits the ethical considerations raised in Chapter 2. Indian musical techniques should be incorporated into jazz without resorting to exoticism or the appropriation of styles without understanding their cultural significance. The aim is to cultivate a creative exchange that honors heritage while embracing innovation, reflecting Bhabha's notion of the *Third Space*, where new practices emerge through collaboration rather than mere imposition.

In this section, I will demonstrate how the theoretical principles discussed earlier, particularly those related to rhythmic adaptation and hybridization, can be applied in practice.

To concretely demonstrate the creative application of Indian rhythmic material in a jazz context, I have adapted a *Kaida* based on the phrase "Tirakite" in Wayne Shorter's composition, "*Footprints*." This jazz standard, composed in 6/8 and typically played as a minor modal blues, offers a broad rhythmic structure ideal for polyrhythmic exploration and cross-cultural adaptation. As a drummer, I don't merely transcribe the tabla phrase onto the drums; instead, I rearticulate its structural logic and internal phrasing using the timbral and spatial qualities of the drums. I also shape the dynamics and articulations to maintain the original piece's rhythmic essence while embracing the drums' idiomatic expressiveness.

The starting *Kaida* is based on the phrase *Tirakite*, a commonly used bol in the tabla repertoire characterized by its rapid division into triplets and rotational articulation. Due to its rhythmic density, *Tirakite* is often played as a flurry of strokes in the tabla language; it forms the basis for several energetic *rela* or *Kaida*.

Then the bols are mapped onto the drums using a re-voicing technique. I choose to divide the syllables of *Tirakite* in this way:

Ti → hi-hat (closed or partially open for more timbral variety)

Ra → snare (with ghost or accent)

Ki → high tom or rim click (depending on timbral preference)

Te → snare

In *Footprints*, the triplet subdivision inherent in 6/8 time fits naturally into the rhythm of *Tirakite*, so I integrate the adapted *Kaida* during the solo sections, using it as a recurring motif that evolves through dynamic shaping, displacement, and metric modulation. For example:

I start the *Tirakite* pattern on each measure of 6/8, playing two complete cycles per measure (since each cycle of *Tirakite* fits perfectly into a group of four eighth-note triplets).

I change the orchestration in the choruses, initially using cymbals and snare, then moving on to toms and bass drum to increase the intensity. I shift the motif rhythmically, starting on the second or third beat, creating tension and syncopation that dialogues with the soloists' harmonic and melodic improvisation.

At a climactic moment, I introduce a *Tihai* derived from the final phrase of the *Kaida*, repeating a four-note cell (*Tirakite*) three times to resolve sharply on the first beat of the form's next chorus, reflecting both jazz phrasing and Indian cadential logic.

This adaptation exemplifies how the principles of the *Kaida*, thus a fixed theme, variation, and development of improvisation, can be integrated into jazz drumming. Rather than treating the material as "an exotic ornamentation," the *Tirakite* phrase becomes a generative cell for constructing a rhythmic identity.

In conclusion, by incorporating elements of tabla vocabulary, such as the *Kaida* and *Tihai* structures, into jazz performances, using "*Footprints*" as an example, I intend to illustrate how rhythmic hybridization can serve both creative and educational purposes. This adaptation process not only connects various musical systems but also fosters critical listening, structural awareness, and intercultural sensitivity among musicians. Ultimately, it underscores the importance of rhythm as a vital medium for

dialogue, innovation, and inclusive education in contemporary musical practice.

4.2 Issues and Limitations of Cross-Cultural Concepts

Numerous challenges emerge when integrating non-Western elements into a Western framework, particularly in achieving a balance between *authenticity* and fusion. A primary concern is the preservation of the integrity of Indian classical music structures while harmonizing them with Western conventions, which frequently results in the erroneous perception that non-Western traditions serve merely as embellishments to a Western narrative.

Clarifying the definition of crossover in music is imperative. A crossover seeks to amalgamate two distinct cultures or musical genres, producing a product that transcends the mere sum of its components. However, this concept elicits several inquiries:

Is the crossover a discernible, unique entity, or does it merely signify a borrowing between traditions? More critically, at what point does a fusion evolve from being a superficial amalgamation to a substantial exchange?

Musicians such as Dan Weiss and Trilok Gurtu have gained recognition for blending Indian rhythms with Western styles. Yet, a true crossover goes beyond merely incorporating rhythmic components; it necessitates an understanding of the cultural, technical, and philosophical underpinnings of both traditions. Genuine crossovers respect and preserve the essence of each tradition, rather than compromising their fundamental qualities for the sake of innovation.

Analyzing context is essential in this discussion. During my personal journey, I asked questions like:

Are we incorporating elements such as Tihai or tabla bol while preserving their structural complexity, or are they merely simplified stylistic gestures that align with Western conventions? Additionally, what criteria should we use to evaluate the success or significance of a crossover?

The criterion outlined in my thesis involves incorporating Hindustani rhythmic structures into jazz compositions, making it a key and relevant approach. This facet aims to investigate how Indian rhythms can be aligned with Western tempos or pieces. As the work unfolds, attention will shift toward a more cohesive understanding that requires expertise in

both rhythmic and structural components, along with the capacity to improvise within these traditions while maintaining awareness of their unique attributes. For instance, employing *Tihais* in jazz could exemplify fusion, as its core value transcends mere mathematical execution; it encapsulates the ability to express the tension and resolution prevalent in Indian classical music.

Aligning tabla finger patterns with drumstick movements and blending various rhythmic styles presents distinct challenges. The tabla's subtle tonal qualities differ from the more straightforward sonic range of drums, necessitating careful sonic adaptation.

Listeners unfamiliar with Indian music may find it challenging to grasp this message. However, if insights emerge from external listening experiences among both the audience and musicians, it can be considered successful.

The advantages significantly surpass the drawbacks. An adeptly executed crossover can generate entirely new expressions, opening up limitless possibilities for musical innovation and showcasing the evolution of traditions in a connected world.

Ultimately, my goal is to create a drumming language that honors both traditions while expanding the boundaries of contemporary drumming, whether through a hybrid set or by exploring Indian rhythmic and compositional structures in jazz. This is a challenging endeavor, as it involves navigating the intricate landscape of cultural exchange, technical expertise, and creative innovation. However, with a thoughtful and analytical approach, these challenges can be transformed into opportunities for growth and musical expression, resulting in a body of work that honors both traditions while remaining innovative.

On the other hand, if we reflect on it, there are no limitations to art, and I regard this belief as a liberating perspective on creativity, where artistic expression transcends the strict boundaries of tradition, genre, and geography.

In the context of intercultural musical practice, as I experienced in adapting the language of tabla to jazz drums, this perspective has helped me explore, invent, and transform the elements of my knowledge. However, this artistic freedom must also confront the notion of authenticity, a concept that Whyton (2010) critically deconstructs, noting that authenticity is a socially constructed and context-dependent

discourse, often used to police the boundaries of what is considered legitimate or "true" within a musical tradition.

Viewing it this way, the artist's exploration of hybrid forms doesn't necessarily diminish *authenticity*; rather, it questions the strict criteria typically employed to gauge authenticity.

Following this reasoning, my performative method reveals a kind of authenticity based not on imitation, but on thoughtful and creative negotiation. This resonates with Whyton's perspective that authenticity emerges from intentionality, process, and critical involvement, instead of strict compliance with traditional standards.

While art offers limitless expressions, its ethical and cultural dimensions require thoughtful examination. An artist's responsibility extends beyond creation to an awareness of the cultural significance associated with their chosen materials. I perceive authenticity as a fluid and engaging process. My goal is to embrace linguistic hybridity as both a creative method and a means of reflection, underscoring the value of intercultural collaboration and rhythmic innovation.

While working on this thesis, I recognized that I was laying the groundwork for a more exhaustive investigation into the creative, pedagogical, and ethical aspects of rhythmic hybridity. By exploring the convergence of Indian classical music and jazz, I asserted that rhythm involves more than mere technical components; it serves as a cultural language that deepens musical comprehension, facilitates intercultural communication, and sparks innovative artistic expressions. This study demonstrates that rhythm transcends musical traits, serving as a crucial means of connecting with time, culture, and communities.

Building upon this foundation, my upcoming research will investigate how practical rhythmic methods can enhance curriculum development, improve performance fluency, and foster inclusive, context-aware collaborative environments. This effort will utilize practical inquiry and pedagogical design to develop a systematic, modular curriculum that merges Indian rhythmic frameworks, such as tala and tabla language, with jazz phrasing, improvisation principles, and cross-cultural adaptation strategies.

This curriculum will focus on technical proficiency and prioritize internalization through learning techniques like vocal recitation. It will be presented through modular workshops and conservatory-level classes, promoting rhythmic fluency and expertise. These modules will also include practical exercises in adapting tabla phrases for drums, encouraging creativity across cultures, and stylistic flexibility.

To assess and enhance this strategy, I will conduct pilot programs in both academic and artistic environments, employing qualitative methods such as classroom observations, student feedback, and performance evaluations. The findings will be disseminated via publications, conference presentations, and open-access educational platforms. Furthermore, I plan to foster international collaboration through artistic residencies and collaboratively designed ensemble projects, promoting ethical discourse and shared learning across cultures.

Within this extensive framework, my research aims to demonstrate how rhythm, viewed as a cultural language, can serve as a vital pedagogical and artistic tool for fostering innovation, inclusivity, and intercultural understanding.

Conclusion

This thesis investigates the convergence of two complex musical traditions: jazz and Indian classical music. Its main objective is to examine how integrating Indian rhythmic language can enhance jazz drumming practice. Through in-depth analysis, hands-on experimentation, and practical application, this study aims to broaden jazz drummers' technical and expressive capabilities by integrating the rhythmic elements of Indian music.

As discussed in this thesis, this exploration stems from the desire to enrich my rhythmic and melodic vocabulary while broadening my expressive capabilities. The intricate fluidity of Indian rhythmic patterns – such as *Tihais*, *Kaida*, *Laggi*, and *Rela* – offers new rhythmic and melodic possibilities that have significantly enhanced my skills as a percussionist and improviser through the language of tabla.

This work represents a step toward a more reflective and introspective musical practice. Exposure to Indian rhythmic structures, notation methods, and playing styles has heightened my sensitivity to rhythmic and melodic nuances. For example, translating the rhythmic language of the tabla into jazz drumming required an understanding of the distinctive qualities of both instruments, promoting a well-rounded musical appreciation.

The fusion of Indian and jazz rhythmic traditions presents an exciting avenue for enhancing expressive and technical skills, increasing fluency, and building confidence across various musical genres. In addition to broadening my rhythmic vocabulary, this integration has revealed that incorporating Indian rhythmic ideas, such as *Rela*, *Laggi*, and *Kaida*, can revitalize jazz drumming by enriching its rhythmic complexity.

Incorporating these techniques into Coltrane's music demonstrates how rhythmic innovation can offer fresh interpretations of jazz compositions, providing new ideas and insights.

Furthermore, this research has considerable educational value. By creating a methodological framework for integrating Indian rhythms into jazz drumming, the thesis represents a valuable resource for music education, both in academic and private settings.

This project examines the connections between jazz and Indian music, underscoring the importance of musical diversity and the ongoing evolution of musical expression. By undertaking this rhythmic exploration, musicians and educators can expand the boundaries of expression, contributing to the growth of jazz and deepening appreciation for diverse global musical traditions. Examining jazz from the perspective of Indian rhythm offers a framework for further musical fusions, demonstrating how different traditions can enrich one another.

As this thesis concludes, it is vital to consider the broader implications of this research for musicians, educators, and the music community. The connection between jazz and Indian rhythmic languages broadens our auditory perspectives, linking diverse musical cultures and promoting artistic exchanges that transcend geographical and stylistic boundaries.

Reflecting on the results, I realize this research exceeded my initial expectations. By carefully examining the solos, tabla rhythms, and the unique application of the bols, I have discovered rhythmic techniques that blend various musical elements, deepening my understanding of rhythm. This exploration has highlighted the connection between different musical styles, demonstrating that the boundaries between musical traditions are blurred. By integrating the concepts of the tabla, I have come to realize that all rhythms and possibilities are interconnected, waiting to be revealed.

An unexpected outcome of this study has been the emergence of a new approach to improvisation. Adapting the tabla rhythms has not only achieved the initial goals but has also revealed new creative avenues in blending and rhythm. This process has highlighted that the creative possibilities significantly exceed the limitations faced.

This research has deepened my understanding of the complexities of blending musical traditions, both academically and personally. I am excited to continue studying this field and to explore how other musicians have addressed similar challenges. My study of Indian rhythmic techniques, particularly complex rhythmic cycles and bols, has had a profound influence on my musical practice. Understanding these techniques has enhanced my performances, introducing depth and nuance while allowing for a more flexible and innovative style of improvisation. For instance, incorporating onomatopoeic bols has introduced unique tonal variations to my drumming.

Moreover, the incorporation of Indian rhythmic techniques has been substantial, resulting in a profound fusion that has profoundly shaped the music itself. Asymmetrical cycles, for example, have inspired livelier rhythmic frameworks, pushing the boundaries of traditional jazz structures and broadening expressive possibilities.

Embracing these techniques has required substantial effort to grasp the essence of Indian music and its intricate rhythmic patterns. In summary, I recognize the significant influence of reflection, adaptation, and structured learning in merging intricate musical components, like tabla and jazz drums. I am developing strategies to tackle challenges, considering new viewpoints, and integrating novel concepts or methods, all of which foster my growth and creativity as a musician.

Exploring the blend of tabla and jazz drums lays a strong foundation for musical development. Embracing this inclusive approach in music education is crucial for diversifying and enriching the global music landscape. This research introduces fresh insights into rhythm, composition, and improvisation on a global scale, fostering the creation of hybrid works that embody cultural diversity.

Following this research, I believe that the future of rhythmic education does not hinge on choosing between Eastern and Western traditions, oral and written traditions, or tradition and innovation. Instead, it focuses on nurturing musical bilingualism grounded in respect, active listening, and ongoing dialogue.

Music has a unique ability to unite different cultures, promoting understanding and collaboration. A thoughtful approach to music education that honors and integrates diverse traditions builds cultural bonds and fosters a more inclusive musical environment. The fusion of eclectic musical heritages, primarily through jazz and Indian music, has significant potential to create new beauty and meaning that enrich our human experience.

In conclusion, music's ability to transcend cultural boundaries creates numerous opportunities for innovation and collaboration. By embracing an inclusive approach to music education and practice, we cultivate a richer and more interconnected global music scene, where the fusion of diverse traditions inspires and transforms us all.

Whether the desired result is a combination of the best of both traditions is an entirely different matter that can no longer be answered truthfully. However, at the moment, it would be premature to propose that this tendency toward mass education and the acceptance of the intervention of the written symbol will ultimately spell the demise of many of the concepts inherent in the present aurally transmitted tradition. It will break down the barriers surrounding accepting other notated traditions, however complex they may be.

(Stewart 1974: 414-417)

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