

A Comprehensive Analysis of Mardala, Mridangam, and Pakhawaj in Traditional Indian Music

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Abstract:

This comprehensive study delves into the intricate world of three classical percussion instruments - Mardala, Mridangam, and Pakhawaj - highlighting their historical significance, structural complexities, tuning systems, and playing techniques. By conducting a thorough comparative analysis, this study aims to provide a deeper understanding of these instruments' cultural heritage and musical contributions within the realm of Indian classical music.

Keyword: Mardala, Mridangam, Pakhawaj, Percussion Instruments, Traditional Music, Odissi Dance, Traditional Background, Physical Structure, Tuning System, Playing Techniques, Comparative Study, Traditional Instruments, Cultural Significance, Musical Heritage, Indian Classical Music, Carnatic Music, Bharatanatyam, Kuchipudi, Kathak, Dhrupad, Dhamar.

Introduction:

The classical percussion instruments of India, Mardala, Mridangam, and Pakhawaj, represent a profound fusion of tradition, innovation, and artistic expression. This comparative exploration seeks to unravel the rich tapestry of these instruments' origins, development, and cultural significance. By examining their historical evolution, physical attributes, tuning mechanisms, and playing styles, we aim to shed light on the unique characteristics and enduring legacy of Mardala, Mridangam, and Pakhawaj in the realm of Indian classical music.

Historical Background:

The Mardala, also known as Pakhawaj in some regions, holds a significant place in the cultural heritage of Odisha. Its lineage can be traced back to ancient times, with evidence found in archaeological excavations and temple sculptures dating back centuries. The Mardala is believed to have been innovated and introduced during the later part of the 10th century A.D. in Odisha. Sculptural representations of dancers and musicians playing the Mardala can be found in various temples across the region, indicating its association with classical dance forms like Odissi. Over the centuries, the Mardala has evolved into a quintessential accompaniment for classical Odissi music and dance performances, serving as a rhythmic anchor for dancers and musicians alike.

The Mardala's deep-rooted connection with Odissi classical dance makes it an integral part of Odissi music and dance performances. It provides the rhythmic framework for Odissi compositions, accentuating the

intricate footwork and graceful movements of the dancers. Mardala players employ traditional playing techniques to produce a low, mellow tone rich in harmonics, perfectly complementing the melodic and rhythmic elements of Odissi music.

The Mridangam, originating from South India, particularly Tamil Nadu, has a history that spans centuries. It is believed to have evolved from ancient percussion instruments like the Damaru and the Pani Petti. The Mridangam's historical significance can be traced back to ancient Tamil texts and inscriptions, highlighting its importance in classical music and religious rituals. Over time, the Mridangam underwent structural and tonal modifications, becoming an indispensable component of Carnatic music concerts and accompanying classical vocal and instrumental performances.

The Mridangam is synonymous with Carnatic music and is widely used in classical Carnatic concerts, bhajans, and devotional music performances. It serves as the primary percussion instrument in Carnatic ensembles, providing rhythmic support and improvisational opportunities for musicians. In addition to Carnatic music, the Mridangam is also used in classical dance forms like Bharatanatyam and Kuchipudi, where it enhances the expressiveness of the dancers through its rhythmic patterns and dynamic variations.

Pakhawaj, also known as Mridanga in North India, has a rich historical legacy that flourished during the Mughal era. Its roots can be traced back to ancient percussion instruments used in Indian classical music and folk traditions. The term "Pakhawaj" is believed to have been derived from "awaj," a type of drum mentioned in Mughal-era texts like the Ain-i-Akbari. During the Mughal period, Pakhawaj gained prominence as a versatile accompaniment to various musical and dance forms, epitomizing the cultural fusion and syncretism of Indian classical music.

Pakhawaj is deeply embedded in the classical music traditions of North India, particularly in genres like Dhrupad and Dhamar. It is characterized by its deep, resonant tones and complex rhythmic patterns, making it well-suited for accompanying classical vocal and instrumental performances. In Kathak Dance, Pakhawaj serves as the primary percussion instrument, providing rhythmic accompaniment to the intricate footwork, spins, and gestures of the dancers. The dynamic and expressive nature of Kathak dance is enhanced by the rhythmic patterns and variations created by the Pakhawaj player, making it an integral component of Kathak performances.

Physical Structure:

Mardala, Mridangam, and Pakhawaj exhibit distinct physical structures that reflect their regional influences and playing styles. Mardala features a barrel-shaped wooden drum with composite layers of skin covering its asymmetrical hollow body. The right side, known as Dahina, is smaller in diameter and covered with a composite layer of skin, while the left side, known as Bayan, is larger and covered with a more complex composite layer. The Mardala's unique construction contributes to its low, mellow tone and rich harmonics, making it an ideal accompaniment for classical Odissi music and dance performances.

In contrast, Pakhawaj boasts a cylindrical wooden body with distinct playing surfaces known as Valanthalai and Idanthalai, covered with treated skins. The cylindrical blocks of wood inserted between the braces and the wall of the Pakhawaj are larger than those of the southern Mridangam, contributing to

its distinct tonal quality and resonance. The design of the heads on the Pakhawaj is slightly different from the Mridangam, with the outer layer of skin cut away more, exposing more of the surface of the second layer and widening the playing area. This structural difference affects the degree to which the higher partials are damped, influencing the instrument's pitch and tonal clarity.

Mridangam, on the other hand, showcases a unique double-layered drumhead made from treated skins, providing clarity and resonance. The intricate construction of the Mridangam drumheads allows for precise tuning and tonal control, making it a versatile instrument suited for solo performances and accompaniment in Carnatic music ensembles.

Tuning System:

Achieving the perfect pitch and tonal balance is crucial in Mardala, Mridangam, and Pakhawaj, necessitating meticulous tuning systems. Wooden wedges and metallic hammers are used to fine-tune the drumheads, ensuring harmonious resonance and tonal clarity. In Mridangam, a complex tuning system involving wooden wedges and leather straps is employed to achieve optimal tonal quality and resonance across both drumheads. The bass skin is traditionally prepared for playing with the instrument by a batter of flour and water, freshly applied each time to produce its characteristic low-pitched sound. Additionally, the treble skin is fitted with concentric rings of dense black hardened paste, enhancing its resonance and harmonics.

Playing Techniques:

Mastering the playing techniques of Mardala, Mridangam, and Pakhawaj requires a deep understanding of rhythmic patterns, hand positions, and stroke techniques. Players employ a variety of finger techniques, striking patterns, and hand positions to navigate the instrument's surfaces, producing complex rhythms and melodic motifs. The playing position for Mardala and Pakhawaj involves sitting horizontally on a cushion in front of a crossed-leg, with the larger bass-skin played with the left hand and the treble skin by the right hand. In Mridangam, the left side is played with the open left hand, while the right side is played with the right hand using finger and palm techniques.

Conclusion:

In conclusion, the detailed exploration of Mardala, Mridangam, and Pakhawaj underscores their profound impact on Indian classical music. From their ancient origins to their intricate physical structures and precise tuning systems, these instruments embody centuries of cultural heritage and artistic innovation. Whether accompanying classical dance performances, solo instrumental renditions, or ensemble compositions, Mardala, Mridangam, and Pakhawaj continue to captivate audiences with their rhythmic complexity and melodic richness, serving as timeless symbols of India's musical legacy.

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