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Skin to Fibre: Material Transformation and its Impact on Performance Practice in South Indian Percussion Instruments

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Abstract

This paper investigates the shift from traditional animal skins and wood to synthetic alternatives in South Indian percussion instruments. Drawing from practitioner's insights from Andhra Pradesh, Tamil Nadu, and Kerala, the study analyzes how scarcity of traditional materials – due to competing industrial demand, conservation laws, and religious-political tensions- force artisans and performers to experiment with new materials. The research also highlights the intersectional nature of sonic identity, ritual purity, performance aesthetics, caste identity, and artisanal livelihood. While Tapetta Gullu performers have embraced louder materials to maintain spectator appeal, others like traditional *Chenda* performance in Kerala resist such changes, citing sonic inferiority and ritual contamination. Finally, this paper argues that the percussion instruments are not just for music and entertainment, rather they embody and reflect the surrounding social relations, and that their transformation reveals complex connections between cultural authenticity, religious practice, and the survival of marginalized artisanal communities in contemporary India.

Keywords: South Indian percussion, material culture, artisanal knowledge, caste and craft, cultural transformation

Introduction

Percussion instruments are an essential part of rituals, performances, and celebrations in the South Indian landscape. Traditionally, percussion instruments are crafted from natural materials such as wood and animal skin. The timbre of the instrument depends on the materials used, the quality of the instrument, the size of the instrument, and the craftsmanship. However,

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contemporary scarcity of materials, along with several other factors, has compelled artisans to explore alternative materials such as fiber, tin, and plastic.

Some of the most popular drums of South India include *Mridangam*, *Khanjira*, *Udukku*, *Chenda*, *Maddalam*, *Thimila*, *Thavil*, *Thappu*, and *Pambai*. Almost all percussion instruments use Jackfruit wood for their bodies due to its durability, acoustic properties, and resistance to moisture and termites. The quality of the wood can significantly affect an instrument's tonality and cost. The other aspect of the instrument that decides the tonality is the skin used for the batter head. Instruments with a smaller batter head, such as *Mridangam*, *Thimila*, *Dholak*, among others, use goat skin, and those with larger drumheads depend on buffalo skin. *Khanjira*, a popular handheld musical instrument, is made from the skin of the Monitor Lizard¹, a rarity amongst percussion instruments.

The science behind the percussion instruments is simple. The skin converts the impact into physical vibrations, which resonate through the wooden body. Hence, working in acoustic harmony is essential for the quality of the sound produced. The quality of the skin, the wood, and the instrument are all essential aspects of its sound.

However, percussion instruments are not the only consumer products that require animal skin. Multimillion-dollar industries like clothing, leather goods, and fashion accessories require large quantities of animal skins for their products. This dependence creates a paucity of materials for traditional artisans to construct the instruments. As a result, artisans were forced to switch to materials such as plastic and fibre to replicate the properties of animal skin². Besides the paucity, the 'guilt' associated with using animal hides, religious dogmas, and the vegan lifestyle gaining more traction over the years, were other reasons for such a shift.

Some of these experiments found success, while others were shelved. However, the success came at a cost - the artistic finesse, the tradition associated with the instrument, and the livelihood of the craftsmen. The following section discusses the repercussions of replacing skin with other materials in percussion instruments in the southern states of Andhra Pradesh, Tamil Nadu, and Kerala.

Tapetta Gullu, Andhra Pradesh

Tapetta Gullu is an exuberant, ritualistic, and acrobatic folk-art form originating in the Srikakulam district, Andhra Pradesh. *Tapetta* is the drums, which are tied to the performer's chest, and *Gullu* means to announce. It is performed as part of a ritual to appease the rain god '*Gangamma*' by the shepherds and cowherds during the '*Bheeshma Ekadeshi*' festival. The form requires performers to be in excellent physical condition to execute stunts and pirouettes for visual splendour. The traditional drum used in the performance, *Tapetta*, is crafted from tin and

¹ This is not true anymore since the Monitor Lizard is considered an endangered species.

² In some cases, the shell of the instruments was also replaced.

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sometimes brandishes potato wafer packets as a batter head. Shri. Ramakrishna, one of the exponents of the art form, notes:

Since the time I can remember, it has always been tin, but some tribal groups did engage in the art with drums of skin hides. The choice of skin over tin is too obvious for us. Skin produces less sound, and louder sounds give us a sense of exuberance during the performance. Hence, we have shifted to tin from which household doors are made. To keep our spectatorship alive, we had to adapt to louder drums.

Ramakrishna's comments shed light on the fact that tin, as a material of choice for *the Tapetta* head, was not a recent choice. However, musical instruments have been manufactured since ancient times using naturally available materials; hence, there must have been a point at which the artisans decided to switch to tin. The reason for the choice, according to Ramakrishna, is the increased loudness by replacing skin with tin and plastic. Welch and Fremaux, in their paper on qualitative studies on loudness of sound, comment 'that loud sound is arousing, that it enables greater socialization, that it masks unpleasant things, and that it emphasizes personal identity' (Welch & Fremaux, 2017). Hence, the way the performers play *Tapetta Gullu* changes when the instrument is replaced with louder materials.

Apart from the loudness, the use of plastic wafers, with the brands and names of companies intact, stands out from the other traditional costumes and paraphernalia. However, the question of livelihood and survival transcends traditions and associated dogmas; spectacle and spectatorship precede aesthetics for performers of this art form. In search of a louder sound and greater appeal to spectators, the shift from skin was a natural choice for drum makers and performers.

Parai, Tamil Nadu

Tamil Nadu is a state with a history dating back to the Stone Age. The state is densely populated with tribal and folk-art forms. In Tamil Nadu, one such percussion instrument that has stood the test of time is *Parai*, which forms the backbone of their social celebrations. *Parai* is not exclusive to Tamil Nadu; it is also found in Andhra Pradesh and Karnataka. In Karnataka, it is known as *Tamte*. However, the social assiduity it enjoys in Tamil Nadu is unmatched.

Historically, *Parai* was used in fanfares called *Murasu* during the royal entry of kings at the palace entrance. *Murasu* were used to make announcements on important occasions, especially by the king's aides, whether regarding war, *the Panchayat* assembly (a South Asian political system mainly found in India), temple processions, or festivities. *Parai* was an important conduit for that. *Para* means to tell in Sangam Tamil. Some tribes of Tamil regions were employed mainly for corpse disposal and scavenging in those times (continue to do in some parts of the state and country). The cow is considered holy in the Hindu religion, and lower castes are considered unworthy of being able to touch the animal (Bhasin, 2018).

Higher caste clergy dissociate themselves with the animal once it is dead and expect the scheduled castes to do the burial. These castes indulged in the consumption of dead cattle. Post

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consumption, the skin of dead cattle and other animals is used in the construction of the instrument and for other purposes. These tribes were also employed by the so-called higher-caste clergy and upper castes for the *Murasu*. Slowly, these *Murasu* shaped into what we see now, *Parai Attam*, a dance form performed by *Parai* instrumentalists.

Later, people from different sections of society started learning the art form and performing irrespective of Caste. However, the intricacies of the caste system and its presence are still observable. An instance of this, among many, is the *Thavil* exponent Valayappati Subramaniam's refusal to participate in a function because his name appeared in the brochures alongside a *Parai* exponent (Olivannan, 2018). This hierarchy reflects T.M. Krishna's observation that "the Brahminical aesthetic has always privileged certain instruments and sounds while denigrating others, a hierarchy that mirrors and reinforces social hierarchies" (Krishna, 2020, p. 112).

The skin primarily used for the drums is cow, with buffalo as a predominant source. However, there is a migration from skin to fibre, which is involuntary and unwelcoming for some artists. As some find this change a perk, others see artistic shortcomings because of it. Perks include not having to heat the drums before a performance. Hence, the skin is tight and produces crisp, high-pitched sound. Low-cost fibre can be easily replaced once broken, thus reducing the hassle of transportation and storage. Rodents devour on skin but not fibre, which makes it viable to store drums even in conditions that are non-conducive for long-term storage. Fibre allows drummers to leave their natural performing environment and travel to colder places to perform with little or no effect on the instrument's timbre. Also, fibre skins are easy to procure and manufacture. In comparison, the animal skin variants require a waiting period, since making each skin involves manual procedures that can take days at a stretch to complete.

Although fibre is more functional and offers many benefits, unlike *Tapetta gullu* dancers, many *Parai* practitioners do not accept the change, citing aesthetics and tradition. For the exponents and connoisseurs, the fibre skin *Parai* is losing its place in the culture. The sound for them and the harmonics which the skin hide drums produce are much melodious in terms of acoustics. Nagaraj, a *Parai* Exponent, from Tamil Nadu also believes, the sound of animal skin *Parai*, although is not louder than fiber, can reach *Pakkath Ooru* (nearby village), underlining the preference of skin over fiber. Nagaraj also mentions that there is no change in the style of playing in both types of *Parai*. However, the sound and the ritual of heating before the performance is something that makes the skin *Parai* stand apart.

Percussions of Kerala

The state of Kerala exhibits a deep and comprehensive understanding of primordial traditional art forms. From tribal art forms to extensively researched and canonised art forms like *Kathakali* and *Koodiyattam*, this region has produced them. Primary percussion instruments found in this southern state are *Thimila*, *Chenda*, *Maddalam*, *Edakka*, *Udukku* and *Mizhavu*.

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Each instrument originated centuries ago and has been shaped countless times into the instruments we see today; few of them date back to the age of *Natya Sastra* and still retain their original construction. *Chenda* is also found in *Tulu Nadu* in Karnataka and Tamil Nadu. In Karnataka, it is known as *Chende*. Whatever the christening be, the instrument is known for its distinctively loud and sharp sound and is often regarded as the 'King of Drums' and also as '*Asura Vadhyam*' (Demonic instrument). Another indispensable instrument for festivals in Kerala is *Thimila*, an hourglass-shaped instrument hung from one shoulder and played with one hand. It is primarily used in '*Panchavadyam*', '*Sree-bali*' and '*Sree-bootha bali*' in temple rituals. Another soft-skinned instrument, *Edakka*, known as the '*Deva Vadhyam*' (God's instrument), is a major contributor to many performing arts in Kerala. It is an hourglass-shaped drum with soft, thin skin at both ends, and is played with extremely subtlety in comparison to *the Chenda* and *Thimila*.

Popular skins used for construction include calf, Buffalo, Cow, deer, and Iguana³. The state is replete with cows, calves, and buffalo due to its active dairy industry, but procuring their skins has also become arduous. One of the main reasons is the enormous incoming demand for drums from buyers, and the growing competing industries for animal skin.

Lakhs of *Chenda* players in the state make ends meet with these percussions, and thus, artisans find themselves in a predicament due to the scarcity of skin. This surging demand and the lack of skin trade led traditional skin artisans (*Thokkal Kollan*) to seek unprecedented ways to experiment with instruments. As a result, *Thimila* and *Chenda* were tried with fibre as a replacement for the skin.

Chenda, with a fibre skin, was outright rejected because the sound produced was nothing but an apish replication of Western drums. Many exponents shun and disapprove it. Upon being asked about conditions prevailing in the crafting of the instrument, Unni from Ernakulam district, who makes a living out of crafting wood for *Chenda* reminiscence, said:

Kerala Kalamandalam once experimented with the body of the Chenda, replacing it with fibre. Although the cost was much lower than the actual cost if wood had been used, the trial failed miserably. Sonic's character was far away from what the connoisseurs were looking for.

Ramprasad, an accomplished artist, *Chenda* player, also mentions one J.K. Marar who had crafted a fiber *Chenda*. However, he strongly believes that a fiber *Chenda* will never gain popularity in Kerala. The reason he believes is that in *Thayambaka*⁴ the *Kai Shabdam*⁵, sounds

³ Deer and iguana skins are not considered for construction anymore as they have been put under endangered species category and poaching has been made illegal.

⁴ A kind of solo *Chenda* performance accompanied by other instrumentalists.

⁵ The sounds made by beating the drum skin using performers palm instead of stick.

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created by hitting the batter head on various positions using one hand, are very important. There are up to four *Kai Shabdams* you can make on *Chenda*, and two using sticks. Ramprasad believes that fibre skin will not create *Kai Shabdams* like *Chenda* made with animal skins.

However, the batter head ring or *Chenda Vattam* is made of fibre. Ramprasad believes it is because the material does not affect the sound of the *Chenda*. Also, the material is lightweight, helping players carry the instruments on their shoulders for extended periods. Also, the fibre rings are inexpensive and effectively reduce reliance on wood for construction.

On the contrary, *Thimila* had little success with the fibre skin and was partially accepted by artists across Kerala. Being a *Thimila* player and born and raised in Delhi, I found *Thimila* with a fibre skin rather convenient during winter seasons, as animal skin in winter shrinks, and it is hard to produce any sound from it. At the same time, fibre is immune to weather conditions and ready to play in even the harshest weather. Storage and transportation concerns were a thing of the past with the replacement of the skin. Ramprasad also briefly mentions *Udukku*, another handheld hourglass shaped instrument from Kerala. He specifically talks about its use in *Sashtham Pattu*. According to him, *Shastham Pattu* is performed during colder seasons in Kerala resulting in a necessity to carry multiple animal's skins for replacement. However, fiber doesn't break and is resistant to the weather.

However, the percussionists in Kerala argue that fibre is inferior to skin in terms of sonic properties and sanctity when those instruments enter temple precincts. Ramprasad also believes that fibre skin, although louder, is not audible from afar. According to him, the air does not carry the sound farther than the skin. However, there is no scientific evidence to support this claim, and it can be considered a traditionalist opinion.

Moreover, traditional *Chenda* players have never considered fibre as a possible replacement and never will validate its viability. They are apprehensive of the future as the ban on cow slaughter is not yet enforced in Kerala. However, they do not rule out the possibility, given the prevailing political tensions. If it happens, *Chenda* and *Thimila* might not sound the same again.

Dr Varadarangan and his 'Sri Mridangam'

Now, the sanctity of the drums is called into question not only when traditional skins are replaced; drums with skins are now being targeted and labelled unholy, impure, non-vegetarian, and so on. In 2016, Bengaluru-based vocalist and scientist Dr K Varadarangan was in the news for his innovation with the percussion instruments *Tabla* and *Mridangam*. 'Sri Mridangam', as he called it, is made of a fibreglass shell and polyester films plus rubber-based material imported from China. He claims his instruments, the result of 6 years of arduous research, sound exact or better than traditional drum versions. Many social media and news channels ran stories about innovation, with Taglines such as "Now musicians can go vegan" and "Now play Carnatic music guilt free" (Govind, 2018). It invited accolades from many.

Conclusion

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The unique mechanical and acoustic properties of wood, along with its aesthetic appeal, still make it the material of choice for musical instruments. For centuries, the structural properties of wood that make musical instruments have remained unchallenged. The vibration of wood is the most important property that sets it apart from other materials. Wood is recyclable and readily available. However, due to the greed of our society, the population of trees has reduced to an unfathomable level, forcing us to seek replacements for wood. The search for replacements brought steel, plastic, and fibre into the consumer space and this led to the material transformation in percussion instruments.

The harmonic content of the sound produced by animal skin is unmatched and finds its way into arguments in the same category as Digital V/S Analogue, where analogue mostly wins on accounts of sonic quality. With evidence dating back centuries to corroborate the fact that wood and skin are the natural choice of materials, the recent innovations are a harrowing reality. With that comes another predicament. In the Hindu religion, killing any living being is considered a sin and the religion preaches 'ahimsa' (respect for all living things and avoidance of violence towards others) and equanimity. Also, one of the strong foundations of Hinduism is the 'Bhakti' tradition in which singing, dancing and praising God is a foremost religious practice. In this practice, the drums used are made of animal skins. Hence, this goes against religion. A few neo-clergy argue about the skin instruments used inside the temple as being "unholy" and ask them to be banned. However, for centuries, skin instruments have been used in the temple courtyards, accompanying rituals and choir singing, and devotees have entered a trance to the loud drumming.

Thus, banning the skin instruments inside the temple questions the fervour, customs, and rituals of religion. Percussionists and artisans alike have argued that how can these rituals, which are etched so deeply into Hinduism, be tampered with? They question the blasphemy of banning the skin for the construction of percussion instruments and thus affecting the ritual and service to God. Animal rights activists also advocate the ban, citing animal cruelty, which goes into the creation of instruments. However, traditional artisans assert that no animals are killed in the construction of these Instruments; instead, the skin of dead animals is used (though supporting evidence is scarce). They say that these dead animals serve a purpose even after they are dead by providing their skin for the construction of the instruments which will ultimately be used to serve God. Thus, animals serve God even after they leave their mortal body.

It is unclear whether percussion instruments from South India instruments will continue to resonate with the complex harmonics produced by wood and skin, or whether they will increasingly emit the flatter tones of fiber and plastic. What is clear is that this material transformation is reshaping not only sonic qualities but artisan communities, their craft and associated performance. The sounds we may preserve or abandon, the materials we may embrace or reject, ultimately will reflect the changing values about tradition, aesthetics, and artisanship.

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