

Katalima: A Form of Prayer Accompanied by the Rhythm of Plates

Ethnographic Study of Customary Traditions in Piliana Village, Tehoru District, Central Moluccas Regency

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Abstract: This study examines Katalima, a traditional prayer practice observed by the community of Piliana village, Tehoru Subdistrict, Central Moluccas Regency, Moluccas Province. In the Katalima tradition, prayers are recited while accompanied by a rhythmic beating of eating plates using bamboo strips, combining verbal (prayer) and sonic (percussive rhythm) elements into a single ritual unity. The primary purpose of Katalima is to seek guidance before undertaking a particular activity, whether individual or communal. This study employs a descriptive qualitative approach through ethnographic methods, including participant observation, in-depth interviews with local customary leaders, and a literature review on oral traditions and rituals of Moluccas communities. The findings indicate that the plate-beating pattern in Katalima is rhythmically static, with a tempo ranging between 70 and 80 beats per minute (MM), maintained consistently throughout the recitation of the prayer without significant tempo variation. This steady tempo is presumed to function as a marker of solemnity and a means of sustaining the concentration of both the officiant and the congregation present. This study also examines, in an analogicaltheoretical manner, the psychological dimension required of the officiant to maintain rhythmic precision, as well as the relationship between tempo and physiological bodily states drawn from neuroscience and cardiology literature. Katalima represents a form of local wisdom that illustrates how the customary community of Central Moluccas integrates religious, social, and musical elements into a single living cultural practice. This study recommends further documentation and preservation of the Katalima tradition, given the limited regeneration of tradition bearers and the scarcity of scholarly literature specifically addressing it.

Keywords: Katalima; Traditional Prayer; Percussive Rhythm; Dinner Plate; Oral Tradition; Ethnomusicology.

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I. INTRODUCTION

Indonesia's oral traditions and traditional rituals are rich, many of which thrive in local communities, particularly in the Moluccas Islands. Moluccas people, particularly those living in customary villages, still practice various ceremonies and prayers that have been passed down from generation to generation. The people of Village (Negeri) Piliana, Tehoru District, Central Moluccas Regency, practice a traditional prayer tradition called Katalima, which is a form of local wisdom.

Katalima is fascinating to study because it combines two cultural elements: a religious element in the form of prayers offered for guidance, and a musical element in the form of rhythmic sounds produced by striking dinner plates with bamboo slats. In many religious traditions, prayers are usually said without instrumental accompaniment, but in Katalima, percussive rhythms are an essential part of the

overall prayer process. This combination of prayer words and rhythmic sounds makes Katalima a unique cultural phenomenon.

The use of dinner plates as a sound source is interesting because they are not conventional musical instruments, but rather everyday household objects used in rituals. This suggests that the way local people view the objects around them as a way to express their faith involves a creative process. The striking of the plates with bamboo blades produces a static, consistent rhythmic pattern, a tempo that remains constant at 70-80 beats per minute throughout the prayer, unchanged from the beginning to the end of the procession.

The Katalima tradition tends to be passed down orally from generation to generation through traditional figures in Piliana Village and has not been widely documented scientifically as of the time of this study. Concerns arise about

the loss of knowledge about this tradition, along with the decreasing number of traditional practitioners who fully master its implementation procedures due to the lack of written documentation. Therefore, the purpose of this study is to record and analyze the Katalima tradition more systematically, both in terms of its implementation, rhythmic patterns, and its socio-cultural meaning and function. In addition to these elements, this study also examines the psychological aspects required by Katalima practitioners to maintain rhythmic precision through an analogical-theoretical approach. This study also investigates the relationship between the tempo of plate strikes and the body's physiological conditions in the neuroscience and cardiology literature to gain a better understanding of why a certain musicality is necessary to implement this tradition.

➤ *Problem Formulation*

Based on the background above, the problem formulation in this research is as follows:

- What is the form and process of implementing the Katalima tradition in Negeri Piliana, Tehoru District, Central Moluccas Regency?
- What are the characteristics of the rhythmic pattern of hitting plates with bamboo blades that accompanies prayers in the Katalima tradition?
- What is the meaning and function of the Katalima tradition for the sociocultural life of the Piliana people?
- How are efforts to preserve the Katalima tradition amidst the challenges of current social change?

➤ *Research Objectives*

This research aims to:

- Describe the form and process of carrying out the Katalima tradition in detail.
- Analyze the rhythmic characteristics of hitting plates with bamboo blades that accompany the Katalima prayer.
- Identifying the meaning and socio-cultural function of the Katalima tradition for the people of Village (Negeri) Piliana.
- Formulate recommendations for documentation and preservation efforts of the Katalima tradition.
- Analogically and theoretically examine the relationship between the psychological stability of the performer and the physiological characteristics of tempo with the precision of rhythmic patterns in the Katalima tradition.

➤ *Benefits of Research*

Theoretically, this research is expected to enrich the study of ethnomusicology and cultural anthropology, particularly those related to the oral traditions and rituals of indigenous communities in the Moluccas Islands. Practically, this research is expected to serve as documentation for local governments, cultural institutions, and the people of Village Piliana themselves in efforts to preserve and pass on the Katalima tradition to future generations.

II. LITERATURE REVIEW

➤ *Oral Traditions and Rituals in Indigenous Societies*

One type of culture that is passed down from generation to generation is oral tradition, which is passed down through stories, practices, and behavior, without relying on written documents as the primary means of inheritance. In his anthropological studies, Koentjaraningrat said that traditional societies view various elements around them, including nature and everyday objects, as something that can carry spiritual meaning when treated in a certain way or ritual. This view is important to understand how the Katalima tradition transforms a dinner plate, a common household object, into a ritual tool.

Rituals for indigenous communities have a clear structure, consisting of preparation, main events, and closing stages. This structure allows ritual practitioners to consistently carry out the procession from one event to the next, ensuring that the meaning and purpose of the ritual remain the same even when performed by different generations and individuals.

➤ *Prayer as a Practice of Spiritual Communication*

Prayer can be seen as a way to communicate with the powers believed in in formal religions and local beliefs. In many indigenous communities in the Indonesian archipelago, prayer is often accompanied by other elements, such as the burning of incense, the use of offerings, specific body movements, and sounds. Prayers are not always spoken. These supporting elements enhance solemnity, emphasize sacred space and time, and demonstrate to the congregation and those praying that a procession is taking place.

The prayers recited in Katalima have a specific purpose: to ask for guidance before undertaking an activity. More broadly, this type of prayer can be categorized as a prayer for guidance or *istikharah*, a prayer recited before beginning an important activity, whether for an individual or a group.

➤ *Rhythm and Function of Sound in Ritual*

Rhythm is considered the most fundamental and universal component of music, as it can be found in almost all forms of human sound expression, including ritual. In his study of musical anthropology, Alan P. Merriam emphasized the inseparable social and spiritual functions of sound and music in traditional societies. In rituals, music or rhythmic sounds often serve as time markers, mood regulators, and a way to unite everyone.

This perspective can understand a static or consistent tempo, such as the Katalima drumming pattern of 70-80 beats per minute, as a mechanism for maintaining a solemn atmosphere during prayer. In Western music, this range is typically considered *andante* to *moderato*, meaning neither too fast nor too slow. It is also often associated with a calm, tranquil, or reflective atmosphere. This tempo stability differs from the rhythmic patterns of performing arts, which typically experience acceleration or changes in dynamics to create dramatic tension. For example, the *Bambu Gila* art

form of Central Moluccas emphasizes tempo changes as part of its performance.

➤ *Culture of the Central Moluccas Community*

From the panas gandong and panas pela ceremonies to various rituals related to the cycle of life and livelihoods, such as agriculture and maritime affairs, the Central Moluccas region is known for its diverse traditional traditions still practiced by the communities of the villages (traditional villages). The traditional structure in Central Moluccas typically maintains traditional institutions such as the village king and village saniri, as well as individuals who maintain and carry out various rituals, such as the Katalima tradition in Piliana Village, Tehoru District.

III. RESEARCH METHOD

➤ *Research Approach and Type*

This study uses a qualitative approach with a descriptive-ethnographic approach. This approach was chosen because the aim of the study was to understand and describe in depth a cultural phenomenon, namely the Katalima tradition, as understood and practiced by the people of Negeri Piliana themselves, rather than to test causal relationships between variables.

➤ *Research Location*

This research was conducted in Village Piliana, Tehoru District, Central Moluccas Regency, Moluccas Province, which is the location of origin and the place where the Katalima tradition is carried out.

➤ *Data Collection Sources and Techniques*

The data in this study were collected using several techniques as follows:

- Participant observation: the researcher directly observed the implementation of the Katalima tradition, including the prayer procession and the accompanying plate-beating pattern.
- In-depth interviews: interviews were conducted with traditional figures and the Piliana community who understand and master the procedures for carrying out the Katalima tradition, in order to gather information about the history, procedures and meaning of the tradition.
- Literature study: a search of literature on oral traditions, traditional rituals, and the culture of the Moluccas people as a comparative framework and support for analysis.
- Documentation: recording and recording the process of carrying out traditions, including the rhythmic pattern of plate beating, for the purposes of further analysis.

➤ *Data Analysis Techniques*

Data analysis was conducted through the stages of data reduction, data presentation, and conclusion drawing, as is commonly used in qualitative research. Data from observations and interviews regarding the Katalima procession were reduced to obtain a systematic overview of the stages of its implementation. Data regarding the rhythmic pattern of plate striking were analyzed descriptively in terms of tempo, consistency, and its relationship to the duration of the prayers. Furthermore, these findings were interpreted by referring to the theoretical framework regarding oral tradition, prayer, and the function of sound in rituals as described in the literature review section.

IV. RESULTS AND DISCUSSION

➤ *General Overview of Piliana State*

Piliana Village is a traditional village located in Tehoru District, Central Moluccas Regency, Moluccas Province. Like other traditional villages in Central Moluccas, the lives of the Piliana people are still influenced by traditional values, which are maintained and implemented through local traditional institutions. The Katalima tradition is a living cultural heritage and is still practiced by the Piliana people today, although its frequency depends on specific needs and occasions, particularly before an event deemed important by the individual or community.

➤ *Forms and Processions of Implementing the Katalima Tradition*

Katalima is a prayer traditionally performed by the people of Piliana to seek guidance for a task they are about to undertake. In the Katalima tradition, the prayer is recited while the plate is struck with a bamboo stick. The plate used is a common everyday plate, while the bamboo stick acts as a striking tool, producing a sound when it strikes the plate. This method differs from the usual silent prayer.

Three main stages—the preparation stage, the main prayer stage, and the closing stage—generally comprise the Kata Lima ceremony. In the preparation stage, the person performing the prayer and the necessary equipment, such as a dining plate, bamboo poles, and betel and areca nut, are prepared at the location. In the main stage, the prayer is recited by the person performing it, accompanied by regular and rhythmic plate-beating from beginning to end. In the closing stage, the plate-beating stops when the prayer concludes, marking the end of the Katalima ceremony.



Fig 1 Katalima Tradition is Carried Out in a Traditional House (Personal Document)

The purpose of the Katalima prayer is to seek guidance. This tradition is closely linked to the decision-making process in the Piliana community. These prayers are typically recited before beginning an activity considered important or uncertain, prompting people to seek guidance or clarification before proceeding. For example, before climbing Mount Binaiya, climbers must receive a Katalima prayer from the traditional elders. There is also a search for climbers who go missing during the climb.

➤ *Personal Characteristics and Psychological Conditions of Katalima Perpetrators*

Emotional stability, demonstrated by a calm demeanor during the prayer process, is one of the implicit requirements of the parents in charge of carrying out the Katalima. The musical quality resulting from this calmness is more than just an abstract feeling; it can maintain a constant pattern of beats without changing tempo or pattern.

From a cognitive neuroscience perspective, a mechanism known as the internal clock is associated with the ability to maintain a constant beat without the aid of an external tempo-keeping device such as a metronome. The neural networks involved in this mechanism include the basal ganglia, supplementary motor area, and cerebellum. All of these neural networks work together to provide a subjective representation of time for internally generated movements. In the synchronization-continuation paradigm commonly used in time processing research, subjects are asked to tap to an external beat (synchronization phase), then continue tapping at the same rate without external cues (continuation phase); this continuation phase specifically involves internally generated time-keeping processes. Disorders of

this neural network, such as Parkinson's disease, affect the rate and stability of the internal clock, leading to instability of motor rhythms.

Based on this framework, the requirement for Katalima performers to maintain a consistent beat during prayers, which can last for relatively short periods, suggests that individuals must possess good internal timing skills as well as psychological stability that allows them to perform these functions without being disrupted by emotional stress or physical fatigue. It is common to find it difficult to maintain a consistent rhythm while practicing music. Internal factors such as emotional tension and physical fatigue are often cited as the main causes of unwanted tempo shifts during music playing. This supports the argument that maintaining a stable tempo depends on the performer's psychological state, not just motor skills. This aligns with the observation that older Katalima performers must be calm.

The ability of the practitioner to avoid external sounds during prayer is an additional psychological component mentioned. Because the process of timekeeping uses the same cognitive resources used to process other stimuli, attentional distractions can disrupt the stability of one's internal time representation when conducting research on attention and time perception. Therefore, the ability of Katalima practitioners to maintain a precise beat pattern amidst possible external sound distractions can be considered a sign of a high level of focused attention. It also indicates strong experience and technical mastery in the ritual practice.

Not all members of the community can be appointed to perform Katalima, a further consequence of these personal-

psychological demands. If the stability of the beat pattern is indeed correlated with the maturity of one's internal clock and attentional resilience, then the selection of elders as Katalima performers may also take into account the individual's track record of demonstrating composure and behavioral consistency, rather than simply seniority or lineage. In other words, musical ability in Katalima serves a dual purpose. It serves both as a technical skill necessary for performing the ritual and as a marker of one's social and spiritual capacity to act as a prayer leader. This aligns with the general notion in ethnomusicology that mastery of a type of ritual music often depends on the performer's social authority, as will be discussed further in Merriam's discussion of the functions of music.

➤ *Rhythmic Patterns: Four-Sound Subdivisions and the Demands of Musical Precision*

The use of a four-beat pattern is another prominent technical feature of Katalima. This pattern is known as quaternary subdivision, where each beat, or beat, is broken down into four smaller, equally spaced, or isochronous, beats. Musicologically, this subdivision requires more fine motor control than the basic one-beat pattern. The performer must be able to place the four sounds in precise and consistent time intervals without drifting at the level of the major beats or the subdivisions within them.

To train rhythmic accuracy, the use of aids such as metronomes is highly recommended in music pedagogy. This is because metronomes allow musicians to gradually develop more complex beat patterns such as subdivisions and syncopation. In Katalima practice, there is no metronome or tempo-keeping aid, meaning that the precision of these subdivisions must be maintained entirely by the performer's internal abilities. This is a technical necessity and is closely related to the maturity of the performer's internal clock and psychological stability.

In conventional musical notation, a single beat (e.g., a quarter note) divided into four sounds is equivalent to a ten-sixteenth note pattern (e.g., sixteen notes) played sequentially and evenly. This indicates that at a basic tempo of 70–80 mm, each sound in the four-beat pattern is approximately 187 to 214 milliseconds apart. This is calculated by dividing 60,000 milliseconds by four. This limited time interval between sounds requires fine motor control that must be performed manually and repeatedly over the long duration of the prayer. When performed manually, this fine motor control is much more susceptible to muscle fatigue and tempo drift than a one-beat pattern, which allows for looser movement intervals. Therefore, choosing a four-beat pattern over a simpler pattern can be seen as further evidence of the level of musical skill required of Katalima performers.

The perception of the listener or those participating in the prayer can also indicate the importance of this four-beat pattern. A dense, repetitive subdivision pattern tends to produce a more consistent sound texture than a one-beat pattern, creating a stable "background layer" that supports the congregation's concentration without creating inconspicuous pauses that could break focus. Therefore, choosing a four-

beat pattern is not only an aesthetic choice but also helps maintain a calm atmosphere throughout the prayer.

➤ *Bamboo Plate Accompaniment as a Distinguishing Marker from Prayers in General*

The rhythmic sound accompaniment of plates struck with bamboo slats distinguishes Katalima from other forms of prayer. In many religious traditions and local beliefs, most prayers are recited orally, without rhythmically organized musical elements. In Katalima, there is a consistent sound accompaniment, making it a sonic-ritual practice where sound serves as both a backdrop and an essential part of the prayer process itself.

Alan P. Merriam identified ten important functions of music in society within the framework of ethnomusicology: expressing feelings and aesthetic appreciation, communicating, symbolizing, responding physically, legitimizing social institutions and religious ceremonies, maintaining culture, and integrating society. Understanding the function of the bamboo-plated accompaniment in Katalima requires an understanding of several of these functions. First, the sound of the bamboo-plated accompaniment serves as a formal signal that a prayer procession is underway and demonstrates the authority of the traditional elders as the ritual implementers. Second, the effect of rhythmic sound patterns on the physical condition of the performers and congregation is related to the function of physical reactions, which will be discussed further in the tempo section. Third, certain beat patterns that are passed down from generation to generation demonstrate the function of cultural continuity as part of the distinctive characteristics of the Piliiana people.

Beyond its symbolic meaning and ease of use, the choice of using dinner plates and bamboo slats as sound sources rather than specialized musical instruments such as gongs, tifa, or other traditional percussion instruments commonly used in Moluccas art is also worthy of consideration. As everyday objects commonly found in every household, dinner plates are used as sources of ritual sound, indicating that Katalima is a prayer practice integrated into the community's domestic life. This differs from rituals that require specialized instruments and are separate from daily life. The sound produced by striking a plate with a bamboo slat tends to be loud, brief, and does not have a long resonance compared to the sound of a gong or tifa. The fact that the sound decays quickly (*short decay time*) makes it easier for the listener to distinguish each individual strike within a beat without overlapping echoes between sounds. This sound character also supports the clarity of the four-sound-per-beat subdivision described earlier.

It is important to remember that Merriam explicitly distinguishes between the notions of musical "usage," which refers to the specific situations in which music is played, and musical "function," which refers to the broader reasons why music is played in certain circumstances. In the context of Katalima, the "use" of music is clearly visible during the recitation of prayers accompanied by the striking of bamboo plates. However, the "function" of music, namely

maintaining tranquility, marking ritual legitimacy, and transmitting cultural identity, is more hidden and requires a deeper contextual understanding, as this article attempts to elucidate.

➤ *Static Properties of Beat Patterns: Their Function and Comparison to Performance Music*

Observations show that the beat patterns in Katalima are static, meaning they tend to remain constant and do not undergo significant changes in tempo or pattern throughout the prayer. This static nature has its own functional benefits: with a consistent tempo and pattern, the prayer participants and those present can enter and maintain a certain state of concentration without having to adjust to changes in rhythm.

This static sound pattern differs significantly from the performing arts of Moluccas and other regions in Indonesia. These performing arts typically employ changes in tempo and pattern, such as increasing rhythm toward a climax, as a dramaturgical technique to create tension and a peak in the performance. In comparison, research on ritual music used by several indigenous communities in Indonesia, such as the Daak Maraaq and Daak Hudoq music used by the Bahau Dayak people of East Kalimantan, or the Kangkek music used in the Nyabakng ritual in West Kalimantan, shows that the percussion patterns accompanying prayers and religious rituals in various indigenous communities tend to be maintained consistently throughout the procession. This differs from music used for dance or performance. This pattern supports the argument that the function of rhythm in prayer or religious ritual is usually intended to support solemnity and maintain the duration of the procession, rather than for the aesthetics of the performance or audience satisfaction.

Ritual time management, also known as "ritual time management," relies on maintaining a consistent pattern and tempo throughout the prayer. Without relying on clear visual or verbal markers, participating communities and traditional elders have a reliable way to know that the bamboo plate striking is continuing and not yet finished. This function of keeping time aligns with one of Merriam's stated purposes for music: to legitimize social institutions and ceremonies, where the presence of musical elements serves as a formal sign of the ritual's continuity.

➤ *Andante Tempo and its Relation to Physiological Conditions*

The Katalima tradition is performed at a tempo of approximately seventy to eighty beats per minute, expressed in MM, or Maelzel's Metronome, a standard unit used in musical notation to indicate the number of beats per minute. This is comparable to the Andante tempo category, which is considered moderate, neither too fast nor too slow. The resting human heart rate, which typically ranges between 60 and 100 beats per minute, is approximately this time range. Because of this closeness, many believe that the Katalima rhythm is calming because it aligns with the body's physiological rhythms. However, this opinion needs to be more carefully examined in light of recent scientific research,

as popular beliefs about the relationship between musical tempo and heart rate are far more complex.

Koelsch and Jäncke (2015) conducted a comprehensive review of the cardiology literature on music and its relationship to the heart. Their results showed that listening to exciting music increased heart rate and respiratory rate compared to calming music. Furthermore, listening to music compared to silence increased heart rate and respiratory rate. However, the review stated that no studies demonstrated strong evidence of entrainment, or the direct adjustment of heart rate to the beat of the music. In other words, there is no scientific evidence to support the idea that the heart rate will "follow" the tempo of music like the tapping of plates in Katalima. Some studies have found a more general correlation between calmer tempos and decreased levels of physiological arousal.

An experimental study conducted by Mütze, Kopiez, and Wolf (2018) also found similar results. The study specifically examined the effect of rhythmic beats involving djembe sounds on heart rate. The study found that there was insufficient evidence to support any entrainment or phase synchronization effect between the beats and the listener's heart rate. The study also confirmed that, as is often assumed, there is no direct and simple correlation between musical tempo and heart rate. This study suggests that people respond very differently to rhythmic stimuli, meaning that the calming effect of a particular time may be unique to each person and not a physiological law that applies to all.

Other studies have found that slow to moderate tempo music is consistently associated with decreases in several markers of autonomic arousal. For example, research on heart rate variability (HRV) shows that relaxing music is consistently associated with parasympathetic activity in the autonomic nervous system and sympathetic activity. Pathak's (2024) thesis research at the University of Central Florida specifically focused on tempo variables to evaluate their effects on heart rate, blood pressure, and heart rate variability. This research argues that changes in the tempo of music lead to changes in measures of heart health, making music a convenient way to support heart health.

The literature above, has a more appropriate argument to explain the calming effect of the Andante tempo in Katalima, namely that the performer's heart rate does not "follow" the beat of the plate; instead, moderate tempos tend not to trigger the increased arousal seen in fast or exciting music, thus creating a more relaxed mood compared to when the accompaniment is chilling. This explanation is more in line with the scientific evidence currently available. Furthermore, it does not make overgeneralizations about biological synchronization mechanisms that have not been fully proven.

In contrast to the debated cardiovascular entrainment mentioned above, cardiovascular pathways, moderate tempo, and repetitive rhythmic patterns are also known to play a role in regulating motor movements through the mechanism of motor entrainment. For example, in music therapy, rhythmic

interventions have long been used clinically to aid motor rehabilitation and improve mobility in patients with movement disorders such as Parkinson's disease and cerebral palsy. This is based on the idea that entrainment, defined as the adjustment of one's motor tempo to a stable external rhythmic cue, can help stabilize movement patterns. The same principle may explain why the consistent and repetitive striking of the plates in Katalima helps the practitioner and audience maintain a calm state of body and attention. This does not occur directly through changes in heart rate, but rather by providing a stable and predictable motor and attentional schedule throughout the prayer.

➤ *Respiratory Pathways as a More Proven Mechanism*

A physiological pathway with stronger empirical support is related to respiratory rate, unlike the debated heart rate entrainment argument. In a study published in the journal *Heart* by Bernardi, Porta, and Sleight (2006), faster musical tempos and simpler rhythmic structures were associated with increased ventilation, blood pressure, and heart rate, while quiet pauses between musical exposures reduced heart rate, blood pressure, and ventilation to below baseline. Furthermore, the study found that, compared with non-musicians, musicians showed greater respiratory sensitivity to musical tempo. This may suggest that musical experience may make breathing more adaptable to rhythmic stimuli.

For understanding Katalima, this finding is important because a slowed respiratory rate of between 5 and 7 breaths per minute has been widely associated in the physiology literature with achieving optimal relaxation and increased heart rate variability through baroreflex resonance mechanisms. Some authors have linked this frequency to around 0.1 Hz, or 6 beats per minute. Hypothetically, a drum-beating pattern at an Andante tempo of 70–80 mm with four-beat subdivisions per beat produces a regularly repeating sound cycle of relatively short duration. This hypothesis is thought to provide an external timeframe supporting the slowed breathing of both performers and worshippers, but specific verification of this hypothesis in the Katalima context requires direct physiological measurements that were not available in this study. Based on existing research, it can be concluded more cautiously that pauses and a steady, unhurried tempo are the main characteristics of the Katalima beating pattern. This is because, regardless of the underlying precise mechanism, this pattern's main characteristics are quite consistently correlated with decreased physiological markers of arousal compared to fast tempos.

➤ *Synthesis: Musicality as a Functional Prerequisite in Katalima*

As the previous description indicates, three interrelated elements shape the musical characteristics of Katalima. The first aspect is psychological and personal for the performer, requiring peace of mind and the ability to internally manage time. This is demonstrated by the stability of the beat pattern maintained throughout the prayer. The second aspect is structural-technical, arising from the use of subdivisions of four sounds per beat as a form of rhythmic precision. In practice, no external tempo-keeping device is used. Third, the functional-physiological element is related to the choice of

Andante tempo (70–80 MM) as a moderate tempo. There is scientific evidence that moderate tempos are more conducive to a state of calm than fast tempos, although the mechanism of direct synchronization with heart rate remains unknown.

These three components lead to the conclusion that the musicality required by Katalima performers is not merely aesthetic or performance-based. Rather, it is essential for the continuity of the ritual: the ability to maintain a precise rhythm in a calm state, without the aid of instruments or external feedback, and without being influenced by external stimuli. This aligns with the notion that the musical abilities of ritual performers in many Nusantara ritual music traditions are closely tied to their status and social legitimacy as ceremonial leaders, as demonstrated by Merriam's function of legitimizing social institutions and religious ceremonies.

➤ *Musicality and the Socio-Religious Function of Katalima*

Technically, the music of the previous sections would lose its full meaning. This must be linked to the broader socio-religious role of Katalima in Piliana society. In this section, the musical characteristics described are linked through the psychological stability of the performer, the precision of rhythmic subdivisions, the static nature of the beat patterns, and the use of andante tempo. These are linked to three interrelated socio-religious functions: the legitimacy of customary authority, spiritual communication with God and ancestors, and community integration and continuity.

➤ *Musicality as a Source of Legitimacy for the Authority of Traditional Elders*

A precise and stable striking pattern requires psychological maturity and certain neurocognitive abilities. In the traditional community structure of Central Moluccas in general, the role of ritual leader is determined by individual qualities recognized collectively by the community, not simply by lineage. Observations of the traditional leadership structure of Central Moluccas show that each traditional procession has a clear role assigned to certain traditional leaders, such as the king, saniri, kapitang, and other traditional figures. Each traditional leader has the authority to perform certain rituals, although not all community members have the right to do so. The ability of an elderly Katalima performer to strike the plate calmly and precisely throughout the prayer can be considered a tangible marker directly visible to the community in attendance. Musicality is not merely aesthetic skill; it also functions as a non-verbal language that affirms and validates the position of tradition before its community. This aligns with one of the ten functions of music mentioned by Merriam (1964), namely the validation of social institutions and religious rituals.

➤ *Music as a Medium of Spiritual Communication*

In the Katalima tradition, prayers are offered to seek guidance for future actions. Overall, these prayers serve as a way for people to communicate with God and their ancestors. In an ethnomusicological context, ritual music is considered to have a function in connecting with the spirit world, ancestors, or supernatural powers. Therefore, ritual music is considered essential to the prayer process and cannot be replaced by mere verbal prayer. The musical characteristics

of Katalima are precisely described so that prayer can be understood as an effort to maintain a consistent and uninterrupted line of communication during prayer, as sudden changes in sound patterns can disrupt the reverence required for this spiritual process.

The accompaniment of bamboo plates is not simply an artistic feature used to complement prayers, but an integral part of the spiritual ritual itself. It is a common belief that in many traditional ceremonies, without the proper musical accompaniment, the ceremony would not be complete.

➤ *Music as a Glue for Community Integration and Continuity*

The socio-religious function of Katalima also needs to be understood in relation to the broader socio-cultural structure of the indigenous peoples of Central Moluccas, who are known to have collective ties through the village unit, as demonstrated by institutions such as *pela gandong*, and various local identity symbols such as *Teong Negeri*, which serve to maintain socio-cultural networks and honor ancestors. The plate-beating pattern in Katalima is also passed down through generations as part of the unique cultural identity of the Piliana village, distinguishing it from other surrounding indigenous villages. This occurs because this symbol of collective identity is passed down orally and maintained from generation to generation. In line with Merriam's goal of integrating the community and maintaining cultural continuity, community participation in listening to prayers and experiencing the same accompaniment of sounds strengthens a sense of togetherness and collective identity. At the same time, the consistent pattern of beating from generation to generation also serves as a mechanism for transmitting unwritten indigenous knowledge. Katalima performers must be highly skilled in their technique to ensure that the striking patterns can be taught, imitated, and passed down relatively consistently to subsequent generations of

indigenous elders without significantly changing their form due to improvisation or unintentional changes over time.

Factors such as legitimacy, spiritual communication, and community continuity-integration may explain why the musical characteristics of Katalima described require higher standards of musicality than is typically practiced. Psychological stability and rhythmic precision are not only technical requirements for producing good sound, but also functional requirements that support the socio-religious structure within it. Without stability, the authority of traditional elders as prayer leaders can be questioned, spiritual communication with God and ancestors can be disrupted, and the process of passing on the cultural identity of the Piliana land across generations can be disrupted. This study essentially discusses the musicality of Katalima and how an indigenous community maintains its authority, spirituality, and collective identity through very unique and rigorous sound practices.

The experience of actively reciting prayer produces sound, which also contains spiritual meaning, hopes, and personal beliefs that cannot be reduced to acoustic factors alone. Therefore, the cardiological and neuroscientific findings above cannot be applied directly, but only analogically and hypothetically. In the context of Katalima, the application of sound helps understand why certain neurocognitive abilities are necessary for stable beats. However, this does not mean that the neurological mechanisms of Katalima practitioners have been specifically tested; empirical measurements of Katalima practitioners can be conducted through recordings of beat patterns and acoustic analysis to determine rhythmic consistency and physiological measurements such as the heart rate of the participants.

➤ *Summary Table of Characteristics of the Katalima Tradition*

Table 1 Summary Table of Characteristics of the Katalima Tradition

Aspect	Description
Traditional name	Katalima
Location	Piliana Village, Tehoru District, Central Moluccas Regency
Form	Traditional prayers accompanied by rhythmic sounds
Sound tools/media	Dinner plates are hit with bamboo blades
Purpose of implementation	Asking for directions for an activity to be carried out
Rhythmic pattern properties	Static / consistent throughout the prayer
Tempo	Range 70–80 MM (beats per minute)
Sound duration	Lasts as long as the prayer is said

➤ *The Meaning and Socio-Cultural Function of the Katalima Tradition*

The Katalima tradition is linked to its social and cultural role in the Piliana community. First, in terms of its religious-spiritual function, Katalima helps the community seek guidance from the Almighty before undertaking an activity, thus serving as a spiritual mechanism in the indigenous community's decision-making process.

Second, in terms of social function, the Katalima ceremony strengthens the social cohesion of the Piliana community because the procession usually involves more

than one person, both as the prayer provider and as the performer. A sense of solidarity and togetherness among the villagers is strengthened by their shared presence in the Katalima ceremony.

Third, from a cultural perspective, *Negeri Piliana* represents a unique cultural identity that distinguishes them from other indigenous communities in Central Moluccas. Katalima is a unique marker of local wisdom, thanks to its use of dinner plates and bamboo slats as ritual instruments. It may also constitute an intangible cultural asset that deserves

further attention from the local government and cultural institutions.

➤ *Challenges in Preserving the Katalima Tradition*

As an oral tradition whose inheritance relies on direct narrative and practice passed down from generation to generation, Katalima faces many challenges in its preservation. The first challenge is the limited number of traditional leaders who truly master the entire Katalima ritual, including the prayer recitations and the accompanying plate-beating patterns. Knowledge of the tradition, whether partial or complete, could be lost if it is not promptly documented and systematically passed down.

The second challenge is the lack of scientific research on Katalima. This contrasts with several other Moluccas traditions that have received more attention, such as Crazy Bamboo (*Bambu Gila*) in Central Moluccas. This tradition is vulnerable to information distortion and is often forgotten over time, especially as society modernizes and lifestyles become increasingly influenced by outside cultures, due to the lack of written documentation. This aligns with records from the Moluccas Cultural Preservation Agency, which state that hundreds of cultural works in Moluccas Province have been documented, but not all have been officially proposed and designated as Intangible Cultural Heritage. Therefore, scientific documentation, such as this research, is crucial for the proposal process (Moluccas Cultural Preservation Agency, 2021; Antara News, 2026).

The third challenge is the regeneration of tradition practitioners among the younger generation of Piliana Village. To ensure local traditions, including Katalima, are preserved into the future, the younger generation must continue to be educated about them through local cultural education, both at home, at school, and in the local community.

V. CONCLUSION AND SUGGESTION

➤ *Conclusion*

The musical characteristics of the Katalima tradition demonstrate the relationship between technical-musical elements, the performer's mental state, and ritual function. The technical requirement to consistently and precisely maintain a four-beat pattern during prayer without being influenced by external sounds correlates with the calm nature required of older Katalima performers. This ability, according to cognitive neuroscience research on internal clocks and motor timing, requires above-average musical ability. The accompaniment of bamboo plates is a distinctive marker that distinguishes Katalima from ordinary prayer. Merriam's musical function can be explained primarily as securing ceremonies and cultural connections. Unlike performing arts that utilize dynamic tempo changes to build dramatic tension, the static beat pattern of Katalima emphasizes the functional orientation of rhythm as a means of maintaining duration and solemnity. The choice of an Andante tempo in the range of 70–80 mm, which coincidentally is close to the human heart rate at rest, should be considered carefully. Although recent research suggests that moderate tempos do not necessarily

produce greater physical arousal than faster tempos, there is no strong evidence yet demonstrating direct entrainment *between* heart rate and musical beats. Therefore, rather than relying on a mechanistic theory of biological synchronization, the calming effect of Katalima tempo is precisely explained by the combination of the low level of arousal caused by the moderate tempo and the stable motor-attentional timeframe provided by the consistent pattern of beats.

VI. SUGGESTIONS

- It is necessary to carry out further audio-visual documentation of the Katalima procession, including recording the rhythmic notation of the plate strikes in more detail, as a preservation effort and as material for future scientific studies.
- Local governments and cultural institutions are advised to pay attention and provide support for the preservation of the Katalima tradition, for example by registering it as an intangible cultural heritage.
- Efforts are needed to pass on Katalima knowledge to the younger generation of Negeri Piliana through local cultural education, both formally and informally.
- Further research is recommended to conduct comparative studies between Katalima and other sound prayer traditions in the Moluccas region and the Indonesian archipelago in general, in order to enrich understanding of the variations in sound-based oral traditions in Indonesia.

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