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Mangkoan Sound: the Concept of Traditional Talempong Prohibition in Luhak nan Tigo Minangkabau

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ABSTRACT

Aesthetically, the aim of this research is to reveal the musical taste and musical standards of tuo talempong in alignment talempong tradition – mangkoan sound. By ontology and epistemology; form music talempong in life public Already Lots revealed by the researchers previously. However there are one component important that hasn't been touched by researchers, which is related to draft alignment talempong tradition in Luhak Nan Tigo Minangkabau. Principle base alignment talempong related with the musical taste and musical standards of the tuo (elders) of talempong in Luhak Nan Tigo Minangkabau. Based on qualitative research principles; The researcher becomes the main instrument in collecting research data, including initial study and problem analysis, primary data collection through participant observers – ethnography, in-depth interviews – free and structured, documentation, and data analysis. The analysis was carried out on musical taste and musical standards that were found in the field. Research results show that ' mangkoan the sound ' is A draft alignment talempong tradition in Luhak Nan Tigo Minangkabau. hrough musical sensitivity, tuo talempong in Luhak Nan Tigo Minangkabau created the concept of mangkoan sounds (tala - tuning system) to identify the high and low sounds of jantan-batino talempong.

KEYWORDS

Mangkoan Sound
Adjusment
Talempong
Luhak nan Tigo
Minangkabau

INTRODUCTION

Talempong is a typical idiophone musical instrument from Minangkabau natural culture. Technically there is a term called Talempong renjeang anam salabuhan which is played by three people. One hand holds the Talempong with the other hand hitting with a special hammer called pangguguah which can produce a typical Minangkabau talempong renjeang melody (Arifin, 1987). Generally talempong is almost similar to a small gong and is both made of metal. Philosophically, of course it is related to the values related to the culture of the Minangkabau people. The specific concept related to talempong is discussed in depth by Sastra (2017: 334), there are three pairs called talempong Jantan, talempong Paningkah, and talempong Pangawinan which can be synergized to produce unique melodies. The concept of division into three parts is also related to the division of the Minangkabau cultural area which is called Luhak Nan Tigo Minangkabau. When playing talempong, you need to understand the tuning system called Mangkoan Sound.

Mangkoan sound is draft tuning system of *talempong* (a type of bronze music) is a rare tradition known by the public common in Minangkabau. Mention For alignment talempong can just different, however in a way concept in principle the same. Xavieria Diah say that sound Alone as material most importantly in music new can said fulfil its function if has experience related modifications with level consciousness and power creation man (Xaveria, 2013). Difference tall low sound talempong

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is material most importantly as music after done modification through Power creation tuo (elders) talempong in Luhak Nan Tigo Minangkabau (Sastra, 2019). High and low sound related with the musical taste and musical standards of para tuo talempong in various area in Luhak Nan Tigo Minangkabau. (Sastra et al., 2017). Sound is waves produced by a vibrating objects , include tool music – talempong (Jonni, 2021).

Andar said that the talempong tradition – renjeang anam salabuhan (tenteng six ports) – is a collection of musical instruments that are classified as idiophones, and are played by three people, each musician playing two talempongs. Talempong is held or carried (direnjeang) with the left hand and struck (diguguah) with a special hammer (pengguguah) held in the right hand; creating short melodies typical of Minangkabau talempong (Sastra et al., 2017). Ihalaw explains that a design is a symbol that is given a certain meaning (conception) to a certain event or object (Ihalaw, 2004). The sound of mangkoan is a concept interpreted by tuo talempong in events especially in Minangkabau. This condition is related to when the alignment of the talempong is carried out based on the musical tastes and musical standards of the musicians.

As an aesthetic perspective, this study is of course interesting and important to research through a comprehensive study. An interesting touch with the tuning methods and techniques used by musicians in each region. Traditionally; Alignment To raise and lower the sound frequency, wood is usually used as a talempong beater. Aesthetically, the sound frequency of their talempong will be adjusted to their musical tastes and musical standards. The importance of this research study was carried out in relation to the acoustic paradigm to reveal; in an effort to get an aesthetic picture of the harmony of talempong in Luhak Nan Tigo Minangkabau.

Aesthetics as knowledge was first put forward by Baumgarten with the belief that aesthetics is knowledge related to objects that can be observed and stimulated by the senses; like a work of art (Suryajaya, 2015). Works of art are related to higher human desires, namely aesthetic experience and aesthetic satisfaction. Aesthetic experience is usually an asset for musicians in determining sound standards, such as when musicians harmonize sounds, including talempong. Meanwhile, aesthetic satisfaction is oriented towards the results obtained after they align the talempong and play it. To maintain the taste and sound standards of talempong music; usually the *Tuo talempong* or drummer performs the ritual and *manyadahi* talempong. Aesthetically, the problems to be studied include; Traditional talempong alignment methods and techniques in Luhak Nan Tigo Minangkabau.

Some of the literature references in this article are research conducted by Andar Indra Sastra in 2016 which discussed the different levels of talempong sounds. This research is a guide for recognizing talempong pairs; *Talempong Jantan*, *talempong Paningkah*, and *talempong Pangawinan*. In 2017, Andar in his research discussed talempong as a musical system consisting of three pairs of talempongs: 6 and 1 which are called talempong jantan; 5 and 3 are called talempong Paningkah; and 4 and 2 are called talempong Pangawinan. Further research from Sri Hastanto in 2012 which discussed the design of *Ngeng & Reng* as a Javanese and Balinese Kebyar Gamelan Gong Tuning Matching System included a discussion of acoustic knowledge. Hastanto writes that the distance between two notes, conventionally known as an interval, is measured using the cent system. This distance can be measured using a logarithmic calculation tool with the help of computer technology using German Sengpielaudio software.

METHOD

Qualitative methods are the right and relevant choice for the focus of the study coupled with the researcher's efforts to seek meaning through involvement with the setting being studied (Rifandi, 2023: 512). This primary research data was obtained from locations in various places in Luhak nan Tigo Minangkabau. Primary data collection was carried out through literature studies, participant observers and interviews with various sources. As a participating observer, the researcher is involved in the adjustment process at various locations of the research objects used. Articles and other literature related to material objects and events are provided as additional information which is then used as a guide for interviewing informants.

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A number of interviews with figures and musicians were conducted after they had finished making adjustments to their instruments and performances; The interview focused on musical tastes and talempong music standards in harmonizing talempong. Interview data includes how they began to adapt and maintain talempong music standards. Apart from interviews, documentation is also carried out through audio-visual and visual media. This is done to complete the data and strengthen the argument that the incident really happened and fits the context as needed for data analysis. Data analysis was carried out inductively – in accordance with the characteristics of qualitative research; Researchers build emic thinking methods to provide explanations. The explanation is strengthened by the concept of theoretical thinking - ethics - with expert opinions according to the focus of the study. Any personal assumptions and opinions should be placed in brackets to obtain a sense of objectivity in the study of the phenomenon that is the focus of the study.

RESULTS AND DISCUSSION

Formation of Talempong as a Music System

The right to determine the difference between the high and low sounds of the talempong *jantan* and *batino* is the job of the *Tuo talempong*. *Tuo talempong* was given the authority to determine the tone because he was believed to have higher musical knowledge and sensitivity than the other members. They created the concept of male-batino and used it as a guide in identifying two talempong sounds that have a *janjang* (a kind of interval); if calculated, the interval between the two is around 700s and 800s (cents). The space formed from this range is the basis for creating the talempong music system. In general, tuo talempong have good experience and knowledge of musical understanding in identifying and determining the high and low frequencies of sound from two pairs of talempong. Their musical sensitivity becomes a reference for the sound of *mangkoan* - identifier - talempong which suits the demands of their musical tastes. The sound of the mangkoan is practiced based on the musical sensibilities of the talempong elders which are used as a reference. This reference standard is determined based on their musical experience and knowledge regarding the different tone level systems of talempong music (Sastra, 2019).

Technically, there are two ways to sound the mangkoan, namely; first hit the body of the talempong 'outer yard'; and secondly press 'page' inside. Hitting or putting pressure on the outside of the page is usually used to reduce the frequency of the talempong sound. This reduction was made to maintain the standards of musical tastes of tuo or talempong artists. On the other hand, hitting the inner 'page' or part of the resonance chamber aims to raise the frequency of the talempong sound according to the taste it has. The method is that the talempong artists use the flat contour of the ground and look like they are making a hole approximately the size of the talempong's momong (pencu) (see the following picture).

Figure 1. *Tuo* Talempong Dug a Hole

Figure 2. Reduces Talempong Sound

Figure 3. Increase the Sound of Talempong

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To maintain the quality of the talempong sound, so that the *sipongang* is not too buzzing - the duration of the sound is controlled, usually *the tuo* talempong applies larusan *hardwood* (betel lime) on the inside page, as seen in the following picture.

Figure 4. Pattern for tapping talempong model 1

Figure 5. Pattern for tapping talempong model 2

Figures 4 and 5 show the differences in *sipongang talempong damping*. In Figure 4 it is indicated that the production of the *momong* after being hit is not problematic. However the sound vibrator on the inside of the 'page' needs to be coated with a hard lime solution. This is done so that the *talempong sipongang* is not too long. In Figure 5 it is shown that the sound of the talempong after being hit is too shrill. For this reason, the inside of the baby needs to be smeared with a hard chalk solution, while to maintain sound stability, the inside page needs to be smeared with a hard chalk solution in a cross pattern. Reciting Talempong is part of the mangkoan sound system, so that the quality of the talempong sound can meet the aesthetic quality of the talempong artists in Minangkabau.

Based on knowledge and musical tastes, *Tuo Talempong* creates a Talempong music system with different sound levels. Through an expression; Andar Indra Sastra writes in A saying, according to tradition that the 6 (six) talempongs were created based on philosophy - the concept of metaphor - batingkek holding the duo from below, Sarato Batapiak tanggo duo from ateh with the voice of tingkek Malayang, (telling the story - up - two steps from the bottom and descending - two steps from the top with a floating sound level, became the rationale [rationality] for its creation. One music system consisting of 6 (six) talempongs (Sastra, 2019). Talempong sound level is based on the inner talempong sound with the sound flow levels - T2 and T3. The meeting of these two concepts gives birth to two talempong sounds, two levels of male talempong sound - T5 and T4 talempong which represents bajanjang naiak-batanggo descend (graded up and down) – as written by Andar Indra Sastra as follows.

Based on knowledge and musical taste - *mangkoan sound* ; *tuo* talempong created a talempong music system with different sound levels. Through an expression ; Andar Indra Sastra wrote in A said, according to tradition that 6 (six) talempong were created based on the philosophy - the concept of metaphor - *batingkek tahan duo dari bawah , Sarato Batapiak tanggo duo dari ateh jo tingkek bunyi malayang* (tiered – up – two steps from the bottom and bertapik – down – two steps from the top with a floating sound level, became the rationale for its creation as a musical system consisting of 6 (six) talempong (Sastra, 2019). *Batingkek mamacik duo dari bawah*, meaning that two levels of Talempong sound are created based on the inner talempong sound with a flow of sound levels – T2 and T3. *Sarato Batapiak duo tanggo dari ateh* in the same way lowers two talempong sounds to two

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levels of talempong jantan sound – T5 and T4. The meeting these two concepts gave birth to the talempong music system which represents *bajanjang naiak-batanggo turun* (graded up-down) – as written by Andar Indra Sastra as follows.

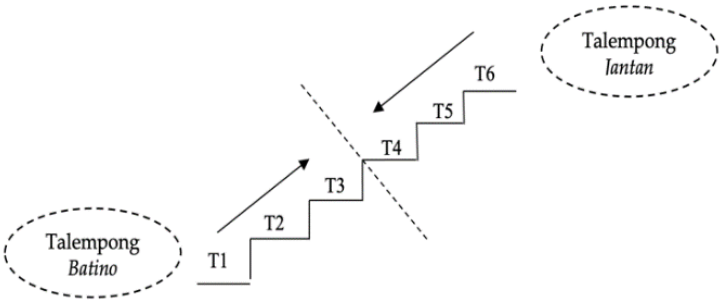

Chart 1. Talempong *Jantan* and *Batino* (Pattern Two) in Forming a Talempong *Renjeang Music System*

The chart above can explain to us that the formation of the talempong music system stems from the concept of binary opposition between *jantan-batino*. Ahimsa said that binary opposition has two meanings, namely: first, binary opposition is exclusive, for example in the categories of married and unmarried. The second understanding is binary opposition which is not only found in various types of culture and natural phenomena, such as day-night, moon-stars, water-fire and others (Ahimsa-Putra, 2001). The *jantan-batino* (male and female) or *ujuang jo pangka* (end with base) drafts – T6 and T1 – include non-exclusive binary oppositions. For Capra, differences are seen as forms - poles - of the same reality from the extreme parts of a single-polar and bipolar whole (Capra, 2005). The relationship between bipolarity is as if two poles, although they can be harmonious or disharmonious and conflict with each other, are always the same distance from each other as the middle point. Both are mutually reinforcing unity and bipolarity (Bakker, 1995). Bipolarity in the *jantan* form - *batino* became the philosophical basis for the formation of one talempong music system - T1, T2, T3, T4, T5, and T6; *Anam Salabuhan*.

When a kite meets three falling talempong sounds, it can produce different sound arrangements. For six talempongs, it is better if the talempong is sounded from below or from above. The rationality of the arrangement of the 6 (six) talempong sounds in different levels represents the concept of *bajanjang naiak lah batanggo turun*. *Bajanjang sampai Batanggo* which descends musically reflects the rationality of various levels or sound structures of talempong. Rationality is a condition of thought and action or activity, thoughts and actions that have rational characteristics. In this regard, rational can be interpreted as thinking and acting or the activity of thinking and acting in a reasonable way which inherently also means mental creation and psychological creation (Guntur, 2007).

These conditions relate to values, beliefs, and techniques that are believed to be the basis and principles that can be explained rationally – sound mangkoan. Sound itself is the most important material in music and can only be said to fulfill its function if it undergoes modifications related to the level of human awareness and creativity or as mental creation (Xaveria, 2013). The level of consciousness and creativity is manifested in one music system and the talempong music system (mental creation and psychological creation) which is based on logical thinking.

Quality Physical : Talempong Sound and Aesthetic Quality

The quality physical form of the talempong is important as a sound source as well as a resonator space, apart from that it also influences the aesthetics of the talempong itself. Aesthetics as, "the science that studies the processes that occur between subjects, objects and the values contained in objects, experiences, properties, and attractive and unattractive parameters." (Junaedi, 2018). Aesthetically, the physical quality and hardwood play an important role in improving the sound quality of talempong. Manyadahi talempong is a simple form of ritual that aims to achieve sound quality that complies with tuo talempong music standards in Minangkabau. The manyadahi

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talempong ritual is a study of the processes that occur between a subject and an object. The relationship between subject and object includes sight, hearing and feeling (Suryajaya, 2015: 1). In this case, the manyadahi talempong ritual is a material object, so aesthetically the discussion is only limited to the relationship between subject and object within the limits of procedure and physical quality: the sound of the talempong and the aesthetic quality.

Referring to the relationship as a material object, the subject-object relationship focuses more on ritual construction related to *sadah* and talempong or can be called physical qualities. The physical quality and hardness play an important role in changing the aesthetic quality of the talempong sound. The source of the sound comes from the *momong* (pencon) which is located in the talempong section. The talempong will make a sound when the *pangguguah* (stick) touches the *momong* with a certain force. When the *momong* makes a sound, the talempong's entire body shivers. Vibrations that cause the air around the sound source to vibrate. The air source vibrations originating from the *momong* are influenced by the resonator chamber, namely the hollow body part of the talempong. The resonator space and body quality have a relational connection in their function of producing a good talempong sound. To make it clearer, look at the following image.

Figure 6. Form Physique Talempong, Source Vibration, Space Resonance

Referring to talempong as a material object, of course we can also determine how precise or beautiful the sound of talempong is based on certain categories. Category good and not Good sound talempong can identified from three elements, namely *rono* , sound *sipongang*, and duration sound.

a. *Rono*

Rono in sound places greater emphasis on the sound image audit presentation presented to the listener. The thing that differentiates one sound from another can actually be differentiated by the way it is hit. The sound of talempong with good rono produces a round sound, and does not produce much excess sound. Additional sounds can be said to be additional sounds to the main sound that are produced due to problems in the talempong body. The additional sound can be caused by the physical part of the talempong being cracked. Cracks in the body of the talempong will produce a sound that doubles when the talempong is guguah (hit). The diversity of sounds can influence the sound of a good rono talempong. Therefore, *Rono* Talempong is determined by several factors, namely material, shape, and differences in the way we play the sound source.

b. Voice *Sipongang*

Sipongang (echo) or what is also usually called *dangiang*, is the quality of the talempong sound that buzzes after being in *Guguah*. Whether the quality of the sound is good or not can be seen from the sipongang sound, but in relation to the auditory image the sound no longer represents the sound of rono talempong. Through the *sipongang* and *pakak* sounds, talempong tuo is able to identify the quality of the talempong sound, whether it sounds good or not good.

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To get a good sipongang sound, the talempong sound needs to be muffled, so that the talempong produces a sound that can meet the demands of musical taste. Tuo talempong does this by doing *manyadahi*, namely applying a lime solution to the inside according to the level of damage to the sound produced by the talempong. Manyadahi comes from the word sadah which is given the prefix *ma* (me) and the suffix *i* which means doing work *'manyadahi talempong'*. The use of *sadah* to muffle the sound of talempong is related to beliefs that contain mystical elements - so that the sound of talempong can produce a sound that is pleasing to the ear and able to captivate the hearts of those who hear it. The categorization of good listening is characterized by the sound of the sipongang which does not interfere with the feeling of music when the talempong is played.

The part of the talempong that is hardened is the inner surface. There are two forms of talempong manyadahi: (1) the inside of the momong and the addition of four crosses; (2) provides four inner crosses without facing the inner parent. First, just add talempong to the inside and add four crosses. This is done if the talempong sound coming from the parent does not produce a good sound. The cross function is to maintain sound balance and reduce the sipongang - duration - talempong so that it is not long. Suka Harjana said that duration is the tempo or time a sound lasts according to the length and shortness of the sound (Hardjana, 1983).

Figure 7. *Manyadahi* Talempong Process

Figure 8. Pattern of *Manyadahi*

Second, just give four crosses without touching the inner cavity of the talempong. This is a sign that the talempong momong makes a good sound, but the physical vibrator needs to be dampened with four cross marks to maintain sound balance and shorten the talempong sipongang. The process and pattern for making talempong manyadahi can be seen in the following picture. The use of hardwood to overcome the sipongang in talempong aims to fulfill the sound quality of the tuo talempong. These efforts are not only carried out physically, but must be accompanied non-physically, namely through rituals which they believe to be true. Efforts to repair and maintain the talempong sipongang sound need to be carried out to maintain the aesthetic quality of the talempong sound.

c. Duration Sound

The duration of the sound or the length of the sound is related to the length of time per second the talempong sound echoes. Through experiments on talempongs that are considered good, it can be seen that the duration of the talempong sound is in accordance with tuo talempong musical tastes. In the experiment, there were four stages of activities carried out, namely: first, preparing quality talempong by purchasing directly from talempong craftsmen in Nagari Sungai Pua – Luhak Agam (see picture on the following page), and recording a series of talempong sounds. before the tuo

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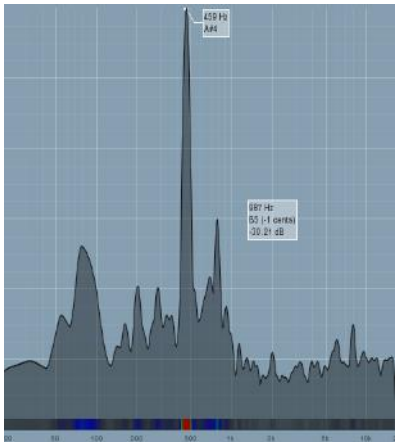
talempong mangkoan sounds (tuning system) with a digital voice recorder. Second, the talempong sound tuning (system tuning) is carried out based on musical tastes and tuo talempong music standards, after which the talempong is recorded again. Third, talempong manyadahi is carried out through a ritual process, and that's when tuo talempong - to borrow Hastanto's term, "breathes the spirit" into the physical talempong. Fourth, re-record the talempong sound after the manyadahi process is complete.

Talempong sound recordings were processed via digital software via Cool Edit Pro software version 2.0, and Nuendo 3. Nuendo 3 is used in this article to help provide a concrete picture of the basics of frequency, sound duration, and overtone sequences that appear through diagrams. The sound duration was measured before and after the talempong was hardened, the results can be seen in the following table.

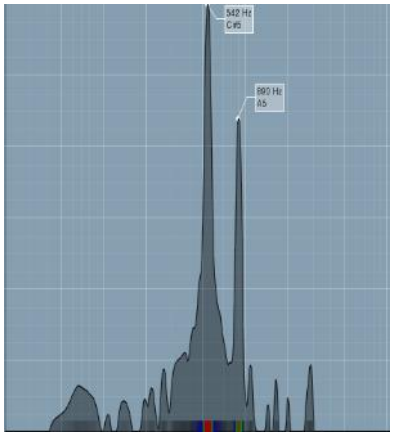
Table 1. Duration Sound Talempong Before Hardened

No	Position Sound *Tree*	Frequency (Hz)	Fundamentals Frequency (Hz)	Duration Sound (Seconds / Seconds)	O verton *series* (Herzt)
1	2	3	4	5	6
T1	A#4-31	357.76	A#4	1,768	459 Hz
T2	C#5-47	539.43	C#5	1,915	542 Hz
T3	D#5-28	612.12	D#5	2,138	612 Hz
T4	E5-9	655.63	E5	2,281	656 Hz
T5	C6+22	1060-5	C6	1,486	1061 Hz
T6	G5+11	789.01	G5	1,288	786 Hz

Table 1 (one) above clearly shows that based on the fundamental frequency we can determine the duration of the talempong sound differently - see column 5 (five). Sound waves originating from the fundamental frequency have an overton series (upper sound). The top sound will produce multiples of the next sound until it can no longer be perceived by the human ear. Through analysis of the audio system used in the Nuendo 3 program, the overtone sequence of each talempong sound can be observed carefully through the following chart.



Overton Series T1



Overton Series T2

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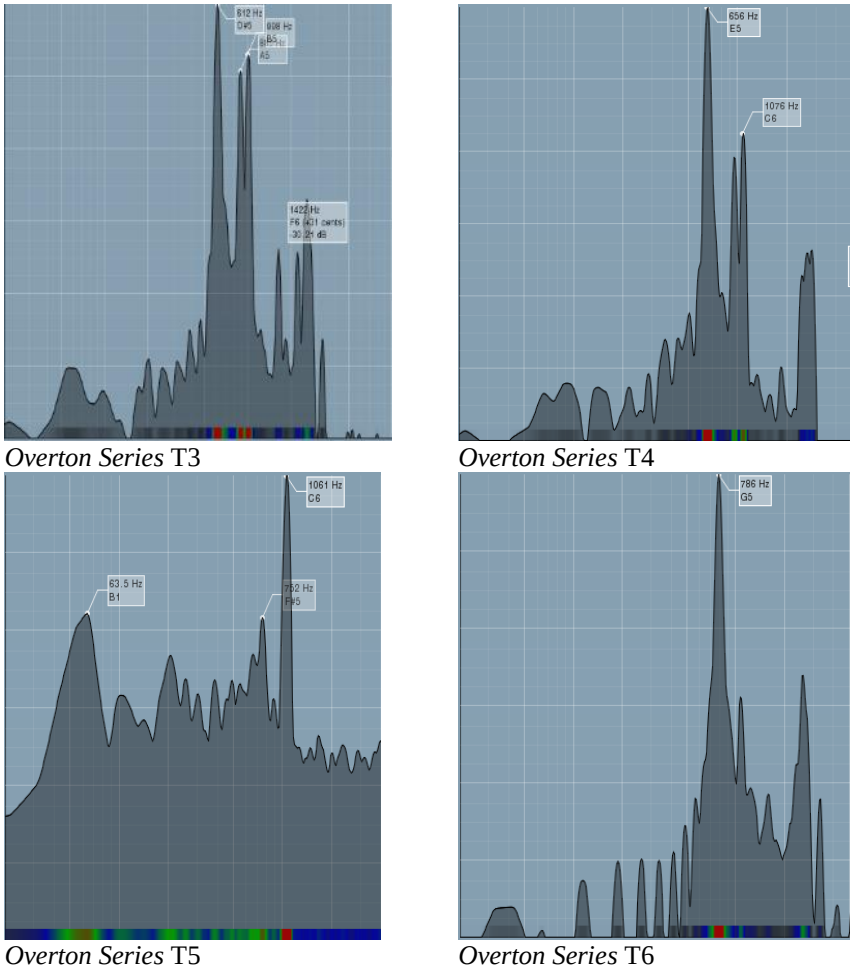

Overton Series T3 *Overton Series* T4

Overton Series T5 *Overton Series* T6

Figure 9. Overton Series Six Fruit Sound Talempong Before Hardened

Figure 9 (nine) above can explain to us that the Overton series does not show stable symptoms, meaning that the next multiple of the sound from the fundamental frequency should be a multiple of the fundamental frequency. For example, if the fundamental frequency is in position A4 456 Hz, then the Overton series should be in position 912 Hz or a multiple of the frequency 456 Hz. It turns out that the six Overton series measured using the Nuendo 3 software show different symptoms. After the *mangkoan sound* (system tuning) process and the *manyadahi* talempong ritual are completed, changes occur in the musical structure and duration of the talempong sound resulting from the frequency fundamentals, the results can be seen in the following table.

Table 2. Duration Sound Talempong After Mangkoan Sound and Tune

No	Position Sound *Tree*	Frequency (Hz)	Fundamentals Frequency (Hz)	Duration Sound (Seconds / Seconds)	O verton *series* (Herzt)
1	2	3	4	5	6
T1	A#4+46	452.06	A#4	1,214	449 Hz
T2	C#5-48	539.41	C#5	1,216	538 Hz

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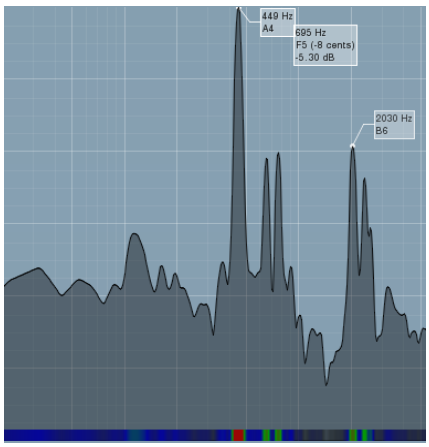
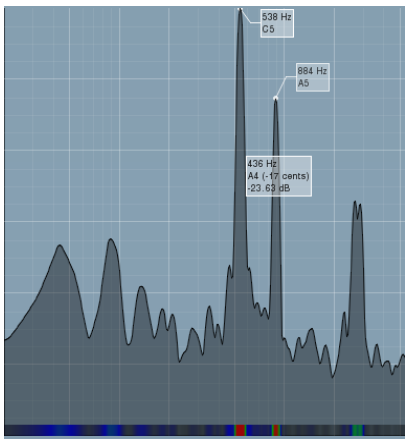
T3	D#5+28	613.64	D#5	1,296	604 Hz
T4	E5-9	656.63	E5	1,225	648 Hz
T5	F#5+20	748.20	C6	1,112	745 Hz
T6	G5-11	783.45	G5	1,040	772 Hz

Table 2 (two) above shows that there has been a change in the position of the main sounds T1 and T5; T1 in sound position A#4-31, and T5 C6+22 (see table 1 on page 12). After the mangkoan tuo talempong sound process is carried out, T1 becomes A#4+46 and T5 F#5+20 – see column 2 (two) in table 2 above. Another important change also occurs in the duration of the talempong sound before and after the talempong is sung. It turns out that after it is chanted, the duration of the talempong sound becomes shorter - see column 5 (five) in graph 6 (six), and 7 (seven) in table 2 (two) above, meaning that the lower the vibration frequency of the talempong sound, the longer the sound wave. formed. In other words, the lower the talempong sound, the longer the travel time until the talempong sound can no longer be felt by our five senses of hearing. On the other hand, the higher the frequency of the talempong sound or the higher the sound, the shorter the travel time for the sound wave - pay attention to columns 4 (four), 5 (five) and 6 (six) in table 2 on page 14.

The ideal duration of the talempong sound must correspond to the reverberation level of each talempong sound, meaning that the longer the talempong sound, the longer the time needed, and the shorter the talempong sound, the less time it takes. Sound waves originating from a fundamental frequency have a series of additional tones and can cause multiples of subsequent sounds. By analyzing the audio system via Nuendo 3 software, the overtone series of talempong sounds can be observed carefully in the following graph.



Overton Series T1



Overton Series T2

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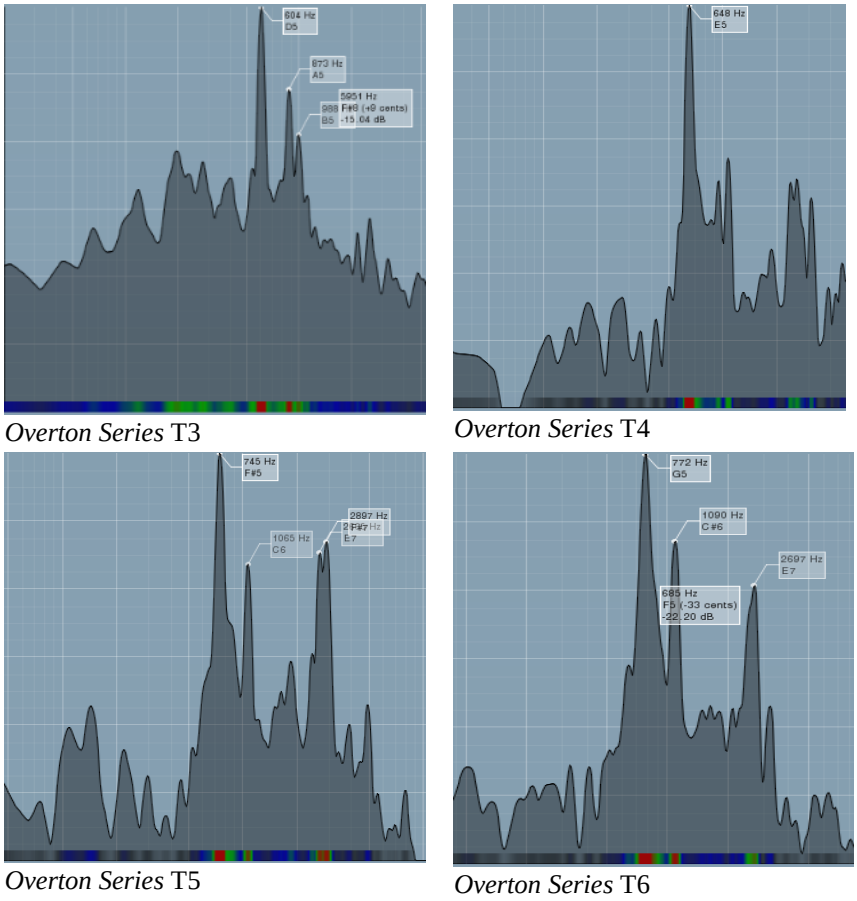

Overton Series T3 *Overton Series* T4

Overton Series T5 *Overton Series* T6

Figure 10. Overton Series Six Fruit Sound Talempong Before Hardened

The image above shows that the overton series or top note of the main sound does not show multiple series of the subsequent sound when the talempong is struck. This can be seen from the sound protrusion that follows the main sound, showing different symptoms for each talempong. Talempong T1 with a fundamental frequency of 449 Hz in the A4 tone region, while the next Overton series has a frequency of 695 Hz in the F5 tone region; 2030 Hz in the B6 tone region. The principal sound T2 is recorded at 638 Hz in the C5 tone region; 884 Hz in the As tone region; 736 Hz in the A4 tone region. The principal sound T3 was recorded at 604 Hz in the D5 tone region, and the following sound was recorded at 873 Hz in the As tone region; 5951 Hz F#8 tone region. The main sound T4 is 648 Hz in the E5 tone region, and does not register any subsequent sounds. The main sound T5 is 745 Hz in the F#5 note region and the next sound appears at 1065 Hz in the C6 note region; 2897 Hz in the F#7 tone region. The principal sound T6 is recorded at 772 Hz in the G5 tone region; the occurrence of the next sound is recorded as 1090 with the note region C#6; 685 Hz in the F5 tone region, and 2697 Hz in the E7 tone region. The duration of such sounds is an important component in the presentation of talempong renjeang anam salabuhan (a set of talempong) to achieve satisfaction and quality of performance.

CONCLUSION

Through musical sensitivity, tuo talempong in Luhak Nan Tigo Minangkabau created the concept of *mangkoan* sounds (tala - tuning system) to identify the high and low sounds of *jantan-batino* talempong. The creation of music in society cannot be separated from various concepts, namely that concepts are a source of knowledge that originates from the world of ideas. Understanding music in people's lives means we are dealing with concepts that are rich with various

meanings. From this meaning, discourse will emerge regarding the scientific paradigm of music, both music as culture and in a cultural context. Through knowledge and musical sensitivity, tuo talempong created the concept of *jantan-batino* to identify two talempong sounds that average about 800 cents in length. The distance created in the range of 800 cents – *jantan-batino* – became the basis for the formation of talempong as a musical system through the concept of the batingkek janjang duo from below, the batapiak tanggo duo from ateh. To maintain the aesthetic quality of the talempong sound, tuo talempong uses *sadah* (a type of lime) which Minangkabau women used to eat in ancient times to eat betel leaves, so that the *sipongang* (echo) of the talempong sound does not produce excessive sound.

REFERENCES

Agatha, M., Ramadhan, A., Thian, A., & Kadiyono, A. L. (2022). Preservation of art culture as a form of enhancing the identity of the Cireundeu Community as a Sunda indigenous ethnic group. *Gondang: Jurnal Seni Dan Budaya*, *6*(2), 261-271.

Bakker, A. (1995). *Kosmologi and ekologi: filsafat tentang kosmos sebagai rumahtangga manusia*. Yogyakarta: Kanisius.

Capra, F. (2010). *The Tao of physics: An exploration of the parallels between modern physics and eastern mysticism*. Shambhala publications.

Hardjana, S. (1983). Estetika musik. *Jakarta: Depdikbud*.

Hastanto, S. (2012). *Ngeng & reng: persandingan sistem pelarasan gamelan ageng Jawa dan kebyar Bali*. ISI Press.

Hidayat, H.A. (2023). Minangkabau Traditional Music Practice Learning Strategies; Student Competency Achievement In The Impact Of Pandemic. *Gondang: Jurnal Seni dan Budaya, 7 (1)*: 1-12.

Ihalauw, J. J. (2008). *Konstruksi Teori: Komponen dan Proses*. Jakarta: Grasindo.

Junaedi, D. (2018). "Truth Epistemology on Aesthetic Value Art For Worship." Presented at Aesthetic Seminar #4 with the theme TASTE, RASA, Fine Arts in the Era of Pluralism Aesthetics (18-19 July at ISI Padangpanjang 2018). *CONTENTS Padangpanjang* .

Putra, H. S. A. (2001). *Strukturalisme levi-strauss: Mitos dan karya sastra*. Yogyakarta: Galang Press.

Rifandi, I., Susandro, S., & Irianto, I. S. (2023). Estetika Komoditas pada Opera Batak Si Mardan. *Jurnal Sendratasik*, *12*(4), 509-519.

Rizali, R., Budiman, A., & Sukmayadi, Y. (2023). Philosophy and Aesthetics of Kendang in the Sundanese Concept of Life . Gondang: Jurnal Seni dan Budaya, 7(2): 461-473.

Sastra, A. I. (2017). The aesthetics of a three-way pattern: The musical concept of Talempong Renjeang and the social system of the people of Luhak Nan Tigo Minangkabau. *Humaniora*, *62*, 61-71.

Sastra, A. I., Anwar, O. M., & Ibrahim, M. N. (2017). The Concept of Pangawinan in the Music Performance of Talempong Renjeang Anam Salabuhanin Luhak Nan Tigo Minangkabau. *Journal of Nusantara Studies (JONUS)*, *2*(2), 333-347.

Sastra, A. I., Fulzi, N., & Anton, S. (2017). Postcolonial Aesthetics: Talempong Kreasi and Talempong Goyang in West Sumatra. *Humaniora*, *29*(3), 245.

Sunarto, B. (2013). Metodologi Penciptaan Seni. *Surakarta: Institut Seni Indonesia Surakarta*.

Suroso, P., Hasbullah, M., Widiastuti, U., Hirza, H., Silitonga, P. H., & Amal, B. K. (2018). Model Creation of Musical String Instrument Based on Ethnic Diversity in North Sumatera. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, *1*(4), 124-135.

Suryajaya, M. (2016). *Sejarah Estetika: Era Klasik Sampai Kontemporer*. Gang Kabel.

Xaveria, D. K. F. (2008). Simponi no. 40 bagian pertama Wolfgang Amadeus Mozart. *Resital Jurnal Ilmiah Seni Pertunjukan*, *9*(2), 94-101.