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Organology Of The Traditional Musical Instrument *Gerantg* In Gayo, Central Aceh Regency

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Abstrack

This study aims to analyze the organology and playing techniques of the Gerantung, a traditional musical instrument from the Gayo region in Central Aceh Regency. The research addresses the limited number of studies that integrate instrument construction with playing techniques and the resulting sound characteristics. A qualitative approach with an ethnomusicological perspective was employed. Data were collected through participant observation, in-depth interviews, and documentation involving craftspeople, players, and traditional leaders selected via purposive sampling. Data analysis involved reduction, thematic coding, categorization, and contextual interpretation to identify the relationship between organological aspects and playing techniques. The findings reveal that the construction of the Gerantung encompassing its shape, materials, and manufacturing techniques directly influences the playing techniques employed and determines the resulting sound characteristics. Playing techniques evolved in response to the instrument's structure; thus, they cannot be separated from its organological aspects. Furthermore, the study found that social changes have influenced variations in playing techniques and the instrument's usage within the community's cultural context. This research underscores the importance of an integrative approach to organology one that goes beyond describing the instrument's physical form to explain its interconnections with musical practices and cultural dynamics.

Keywords: *Organology; Gerantung; Playing techniques; Gayo*

INTRODUCTION

Musical instrument traditional reflection real from knowledge local emerging consequence interaction between humans, environment, and traditions a long (Martarosa, 2017)-standing culture. In the Gayo area, Central Aceh Regency, the music Gerantung No only functioning as escort in music, but also as means for express values social as well as identity culture community local (Mulyana et al., 2017). However, in current developments, the role Gerantung experience enough change big, good in matter how much often used and in understanding about method manufacturing instruments and techniques the game (Fitri et al., 2024).

Existence tool music traditional is closely related with knowledge local that underlies it, both from aspect physical, way produce sound, as well as role socio-cultural (Tanggu et al., 2022) (Basri et al., n.d.). In the Gayo area, Central Aceh Regency, the tools music Gerantung functioning as part from life daily society, not only for entertainment, but also as a medium for expression culture and symbol identity together (Muazin et al., 2020). Although thus, the changes social events that occur consequence modernization and entry culture popular has move position tool music traditional, including Gerantung, from life public to increasing space limited for representation.

AR. Moese together his colleague *Ceh Syeh Refinery* create tool music traditional that is Inspired *Gerantung* from (pendulum buffalo) (Mulyana et al., 2017). *Gerantung* This originate from Gayo language*,* which means hanging. *hanging* is tool music traditional brasal from Gayo, tools music *Gerantung* made from wood made from base from wood jackfruit with very unique shape. At a glance form tool music *Gerantung* resemble rectangle long, tool music *Gerantung* This has 15 notes, in total overall form *Gerantung* This The same will but size long from every His *hanger* different, according with each of their own tones (Munawarah, 2018).

See limitations as well as lack of tool music Traditional in Gayo, things this is what it is factor main for AR. Moese For make an effort create tool music traditional Gayo is one of them tool music *Gerantung* this. Musical instrument *Gerantung* This Once exist from 1988-2000 *Gerantung* This Once played in implementation of the Aceh Cultural Week (PKA) III in Banda Aceh in 1988 and staged art other (Septian Fatianda et al., 2020).

Musical instrument *Gerantung* own character very unique sound and can bring up character music Gayo (Muazin et al., 2020). Musical instrument *Gerantung* This made from wood made from base from tree jackfruit, tree jackfruit This split and cut form A beam with size certain for every the tone. After cut beam then in shape like resemble letter T, then in the section the bottom of the body is dug out or carved until reach required depth, part lower This is room resonance or tube production sound, then attached A pendulum made from wood with size certain right in the middle tube production sound, pendulum This is very important part Because the sound produced is from movement pendulum that strikes left and right sides part in tube production voice (Munawarah, 2018).

Organology discipline the science that studies structure tool music based on source sound, way production sound and system marking from tool music the (Maulana et al., 2022). In realm ethnomusicology, object organology study about tools or instrument music. Study the No only through view culture, art appearance, as well as archeology only, but also includes aspect his physical as textual complete with properties his voice, as well as method manipulate color voice (Sari & Pratama, 2023) (Wrahatnala, 2019).

In a way organology tool music *Gerantung* consists of from four part among them is, body *Gerantung*, holder *Gerantung*, pendulum *Gerantung*, and space production or resonance voice (FIRMANSYAH, 2015). Every structure organology found in *Gerantung* own each function will but every part organology This related between One with the others, *Gerantung* body is the one who becomes part main, then the holder who becomes place handle hand in play *Gerantung*, a pendulum that becomes tools that produce sound and from room production voice or room resonance here it is voice *Gerantung* is produced (Dahri Oskandar, Ari Palawi, 2019).

The sound produced *Gerantung* is from the process of the pendulum hitting left and right sides part in *Gerantung* so that produce voice unique wood. Game technique tool music *Gerantung* is with method stand right on the part middle *Gerantung*, so it's easy reach every tone, position hand appropriate holding on to the part the holder that is on *the Gerantung*, and is needed understanding about scale to be free in the play tool music *Gerantung* This (Munawarah, 2018).

On August 27 , 2007 AR. Moese facing the creator , after the death of AR. Moese tool music *Gerantung* This No printed or increase the amount until now , things this is caused Because lack of knowledge public about organology and manufacturing processes tool music *Gerantung* this , and now This tool music *Gerantung* This is also very rarely shown or staged , things This due to lack of knowledge public around about technique game tool music *Gerantung* this , so it is worrying something moment tool music This will extinct its existence (Mahdi & Shadiqin, 2023).

Issues that arise No only related with preservation, but also with lack of study scientific that can explain Gerantung in a way detailed, especially from corner view organology and engineering the game. Currently, the information related shape, material, and method manufacturing Gerantung Not yet connected in a way systematic with method play tool and character the sound produced. This is result in that practice play music often considered as something skills technical without based on understanding about logic underlying organological conditions. This can cause practice musical become too simple or even distorted, especially when tool music This taught or moved to different contexts from origin.

Study previously about organology tool music traditional generally follow two directions main. First, there is studies that focus on description morphological tool music, such as shape, size, and material, but only limited to inventory without link it with system the sound produced. Second, there is classification - oriented research, especially that which uses Hornbostel-Sachs system, which provides category instrument but often ignore context influential local to manufacture and use tool music on the other hand, the study ethnomusicology has give room for understand function social and meaning culture tool music, but not yet in a way consistent combine analysis organology as base for explain musical (Lee, 2020)(Listya, 2022)practice.

Previous studies about tool music traditional show trend separate approaches. Some study more focus on description organology in the narrow sense, namely identify form physique as well as material compiler instruments, however No connect with technique games and systems the sound produced. On the other hand, there is research that emphasizes technique game as part from appearance, but often ignore connection with manufacturing instrument.

Approach classification that uses system categorization Organology is also often limited to classification type tool music, without explain How structure the influence technique possible games appears. While that, study more ethnomusicology contextual of course put tool music in context life social, but not yet in a way consistent make analysis organology as foothold for understand practice musical the.

Based on analysis critical to study previously, there was gap visible research clear, namely Not yet There is a study that combines analysis organology with technique game in One mutual unity influence. Emptiness This become important Because without understand connection said, analysis tool music traditional will always nature limited. In adition, there are still A little research that includes technique game as part from system organology, not only as element separate performatives. Therefore that, it is needed approaches that can explain connection between form, material, technique manufacturing, engineering games and systems voice in One integrated framework.

If examined more in, study the show existence lack sufficient analysis fundamental, namely Not yet intertwined comprehensive relationship between structure instruments, techniques games and characters sound. In many research, third aspect the treated as separate things, so that No Can explain How construction physique

tool music can limit or facilitate technique game certain. In adition that, study specific about Gerantung is still there too limited, especially those analyzing in a way simultaneously organology and engineering game in One context. Another aspect that is lacking explored is How technique game That develop as response to material and construction characteristics tools, and How change social influence development technique the.

Novelty study This lies in the approach integrative organology, which is clear linking construction instrument with technique games and characters the sound produced. Different with research previously tended to separate analysis physique from performative, study This put technique game as results direct from structure organological instruments. In addition, research This in a way special research tool music Gerantung in Gayo, Central Aceh, which until now Not yet Lots discussed in a way deep in perspective said. The novelty other is study about dynamics technique game as response to material changes, environment social, and practice culture, so that produce greater understanding relevant and comprehensive.

Based on explanation said, research This aim for analyze organology tool music traditional Gerantung in a way comprehensive with emphasize connection between construction instruments and techniques game. In more specific questions research presented is How construction organological tool music Gerantung seen from aspect shape, material, and technique how to make it technique game Gerantung develop as response to construction tool said, what connection between technique games and characters the sound produced, as well as How change social influence organology and engineering game tool music Gerantung among Gayo people.

METHODS

The approach used is qualitative with category descriptive analytical. Choice approach This aim for dig in a way deep about organology tool music traditional Gerantung, which includes aspects physical, system sound, and playing techniques gerantung musical instrument (Imanina, 2020). Study This implemented in Central Aceh Regency, participants in study This consists of from 8–12 people, which includes maker Gerantung, musician traditional, and figures customs local. Informants involved own experience direct in manufacture, use, or knowledge about related cultures with tool Gerantung music. Selection informant done with technique *purposive sampling*, based on Criteria: (1) in -depth knowledge about organology Gerantung, (2) active in play or assemble instruments, and (3) recognized by the community as sources that can trusted. This method used because study This requires specific, in depth, and contextual data, which it does not Can obtained through taking sample in a way random.

Research process done through a number of stage gradual. Stage First is data collection through observation direct to the manufacturing process and practices play Gerantung, interview deep with informant selected, and collection documentation in form photos, videos, and notes field (Fadilla & Wulandari, 2023). Stage second involving organizing data with transcribe results interview and grouping information based on themes, such as structure instruments, materials, methods making, how to play, and system sound. Stage third is data analysis using technique analysis thematic, including data reduction, coding, and categorization for identify pattern connection between organology and engineering play. Stage fourth is interpretation of data in context with connect findings to in practice culture Gayo society. Stage final is withdrawal conclusions that highlight connection between manufacturing instruments, methods play, and characters voice.

Data analysis was performed in a way interactive based on the Miles and Huberman model, which includes Data Reduction, sorting and filtering relevant data with objective research. Data presentation, arranging data in form narrative descriptive for ease understood. As well as drawing conclusions, digging meaning and findings study based on the data that has been analyzed (Thalib, 2022). In study organology, research this also researches a number of aspect main, namely

Structure and form physique tool Gerantung music, playing techniques tool Gerantung music. For ensure data validity, research This apply Triangulation source (compare data from various informants), triangulation technique (comparing results from observation, interviews, and documentation), and triangulation time (data collection is carried out at different times for ensure data (Pradistya, 2021)consistency).

RESULTS AND DISCUSSION

Organology of the Traditional Musical Instrument *Gerantung*

Research by Munawarah (Munawarah, 2018) indicates that the organology of the *Gerantung* instrument comprises several components: the holder, the attachment mechanism, the sound resonance chamber (or tube), the striker (or beater), and the stand.

Based on this analysis, the instrument consists of four main organological parts: the body, the holder, the striker, and the sound production or resonance chamber. While each structural component serves a specific function, they are interconnected; for instance, the rectangular body featuring symmetrical right and left sides serves as the instrument's primary component.

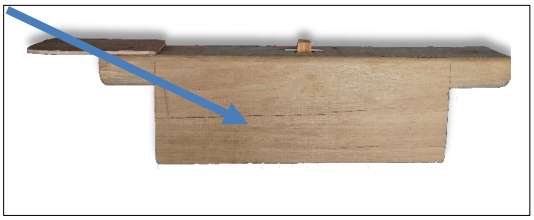

Figure 1. Body of the Gerantung musical instrument.

The *Gerantung* instrument features a handle made of shaped plywood attached to the instrument's body; this handle provides a place for the player to hold the instrument while playing it.

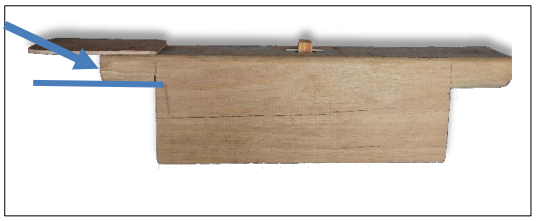

Figure 2. Garantung instrument holder.

The *Gerantung* striker is crafted from the same type of wood and shaped like a stick roughly the size of an index finger; it is then suspended or attached with a nail precisely at the center of the instrument's sound-producing chamber.

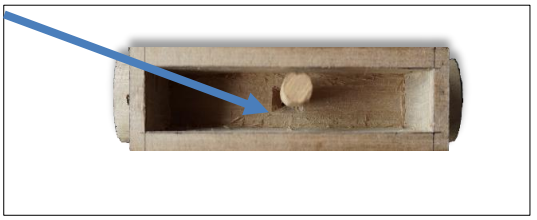

Figure 3. Garantung musical instrument mallet

Sound-producing tube/chamber of the Garantung musical instrument

Figure 4. Sound Production Space

The sound produced by the Gerantung results from a swinging striker hitting the inner left and right sides of the instrument's sound chamber; the specific sound generated also depends on how the instrument is played or manipulated.

Based on interviews and documentation involving Iswandi, data was obtained regarding the musical notes of the traditional Gerantung and the dimensions of each note. The traditional Gerantung features 15 notes arranged on a stand, spanning the sequence: G, Gis, A, Ais, B, C, Cis, D, Dis, E, F, Fis, G, Gis, A. While these 15 notes share a uniform overall shape, their lengths and sound chamber dimensions vary according to the specific pitch of each note; the manufacturing

process remains consistent from start to finish for all of them, as previously described. The dimensions for each note, beginning with the first, are as follows:

The size table for each Gerantung tone is as follows:

To	Body	Ta	Length of the sound production space	Width of the sound production space	In the sound production room
G	29	6	20 cm	3 cm	5 cm
Gis	29	6	19,5 cm	3 cm	5 cm
A	28	6	19 cm	3 cm	5 cm
Ais	28	6	18,5 cm	3 cm	4,8 cm
B	27	6	17,7 cm	3 cm	4,5 cm
C	27	6	17,3 cm	3 cm	4,3 cm
Cis	26,5	6	16,3 cm	3 cm	4,2 cm
D	26,5	6	16 cm	3 cm	4,2 cm
Dis	25,5	6	15,8 cm	3 cm	4 cm
E	25	6	15,4 cm	3 cm	4 cm
F	24	6	15,1 cm	3 cm	3,8 cm
Fis	23,5	6	14,8 cm	3 cm	3,5 cm
G	23	6	13,7 cm	3 cm	3,3 cm
Gis	23	6	13, 4 cm	3 cm	3,2 cm
A	21,5	6	13 cm	3 cm	3 cm

The following are the dimensions for the Gerantung; the G note has a sound frequency of G3 = 196.0 Hz.

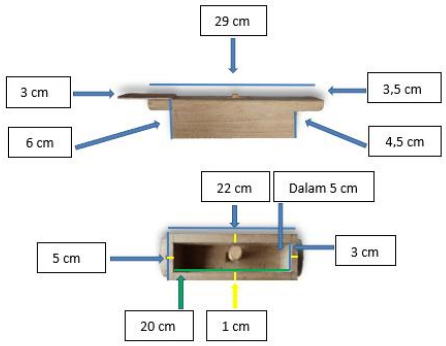

Figure 5. Dimensions of the Gerantung

The image above shows the detailed dimensions of each side of the *Gerantung* instrument. While all *Gerantung* units share the same shape, their lengths vary; each note corresponds to a specific body length, sound chamber length, and sound chamber depth tailored to that particular pitch.

Playing techniques for the traditional *Gerantung* musical instrument.

Figure 6. How to play the Gerantung

Banoe (Firdaus et al., 2019), Broadly speaking, it can be concluded that instrumental playing technique is a method or approach to playing a musical instrument with specific notes or rhythms.

The technique for playing the Gerantung begins with a relaxed standing posture in the center of the instrument's stand. Next, the hands grasp the rear support—made of plywood—while the thumb, index, and middle fingers hold the instrument itself. The player then moves or shakes the Gerantung's body, causing the striker suspended within the resonance chamber to hit the inner right and left walls, thereby producing the instrument's sound. This traditional Gerantung features 15 notes, starting with the sequence: G, Gis, A, Ais, B, C, Cis, D, Dis, E, F, Fis, G, Gis, A. As the instrument follows a chromatic scale, a player must understand musical scale structures to identify the specific notes available; this knowledge allows for greater ease and flexibility in accessing the full range of notes on the instrument.

CONCLUSION

The *Gerantung* is a traditional musical instrument crafted from wood specifically jackfruit woodfeaturing a uniform shape but varying sizes. Its organology comprises four distinct yet interconnected components: the instrument's body, the suspension mechanism, the handle, and the sound resonance tube. Playing the *Gerantung* requires an understanding of musical scales as well as stability in holding the instrument; the player must stand centrally to ensure easy access to the various notes.

Traditional music represents an ancestral heritage passed down through generations. As the *Gerantung* is a signature instrument of the Gayo people, safeguarding and preserving this cultural element is a duty incumbent upon every individual; indeed, culture is a treasure that must be protected and sustained by every ethnic group. The *Gerantung* can also be incorporated into modern musical performances, creating a fusion that is equally captivating to experience.

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