Bibitulit: People's Technology and Artistic Practice as Instruments of Social Critique

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Abstract

This article discusses the *Bibitulit* interactive installation series, which uses people's technology—particularly the TOA—to examine the relationship between sound, technology, and power in Indonesian public spaces. Employing a practice-led research approach, *Bibitulit* recontextualizes the TOA as a symbol of sonic domination and a tool of social control, creating participatory experiences that reveal hidden power dynamics in daily life. The eight works produced between 2017 and 2023 combine readymade objects, sensors, and microcontrollers to explore issues such as sonic control, symbolic obedience, information distortion, and the representation of minority voices. Installations such as bowing TOAs and layered sound distortions go beyond technological aesthetics, functioning as social critiques of inequalities in public sound hierarchies. This article shows how people's technologies like TOAs can be transformed into agents of critique within contemporary art practices, creating spaces for reflection on who speaks, who listens, and how sound mediates power relations.

Keywords: TOA, people's technology, interactive installation, sonic domination

Introduction

As a country characterized by multiculturalism, multiethnicity, and multi-faith, Indonesia's religious affiliations play a significant role in shaping social life. In most regions, the majority of the population is Muslim, which results in the widespread presence of mosques. Each day, the call to prayer (adzan) is broadcast five times at dawn, noon, afternoon, evening, and around 7 PM, using horn speakers installed at mosques.

Horn speakers have been used in Indonesia since the 1930s, first documented at the Great Mosque of Surakarta (Hanggoro, 2018), and gained popularity under the name TOA after distribution by PT Galva in the late 1960s (Petrik, 2022). However, their use has sparked controversy. Some argue that loudspeakers in mosques disrupt the solemnity of worship and may even contradict Islamic principles (Hanggoro, 2018).

Its role has transcended technical functions, transforming into a symbolic instrument that reflects the ideological and political architecture of society. In the post-1965 context, during which mass killings of members and sympathizers of the Indonesian Communist Party (PKI) occurred, TOAs were even used to mark areas as "PKI-free," creating a soundscape saturated with political power and ideological surveillance. In such an atmosphere, sound technology like the TOA functioned not only as a communication tool but also as a symbol delineating ideological boundaries and reinforcing a systematic climate of fear, as recounted by a visitor to the *In the Midst of Chaos, There is Also Bibitulit* exhibition, who noted that TOAs were used to mark PKI-free zones, affirming ideological dominance and fostering structural compliance.

The Bibitulit series also responds to the phenomenon of the Meiliana case in Tanjung Balai in 2016. In this case, a citizen's complaint about the mosque's TOA volume led to blasphemy charges and a 1.5-year prison sentence. Her lawyer argued that the issue was not

about religious doctrine, but rather the technical aspects of sound broadcasting in public spaces (Monza, 2018).

The Tolikara case in Papua occurred in a unique context where Muslims are a minority. In 2015, protests against the use of TOAs during Eid al-Fitr prayers escalated into clashes, shootings by security forces, and the burning of houses of worship and shops. Vice President Jusuf Kalla stated that the conflict was triggered by the use of TOAs, as reported by CNN Indonesia (Armenia, 2015)

Both cases illustrate the tension between freedom of expression, intolerance, and public comfort in the use of sound in shared spaces. These events demonstrate that the TOA is not merely a tool but also a medium that mediates identity conflicts and enforces social control.
Bibitulit creates interactive installations combining readymade, sensors, and microcontrollers. This article discusses the socio-cultural context of TOA use, the creative process of eight Bibitulit works, and concludes that representing social phenomena in art is reinforced through (1) direct interactivity fostering audience engagement, (2) use of electronic devices as responsive media, and (3) contextual selection of TOA as a symbol of sonic domination and power structures.

Purpose

Personal Perspective Shift on the Object (TOA)

Horn speakers, or TOAs, are a very familiar technology in Indonesian society, especially in religious contexts. They are used not only for broadcasting the call to prayer but also for announcements of condolences, religious sermons, and even social activities in mosque communities. The identity of TOA as the "voice of the mosque" is deeply embedded in public perception. This was evident in my own experience when purchasing a TOA for the Bibitulit installation artwork from a second-hand goods area in Bandung. The seller asked, "Is this TOA for a mosque?" In a rush, I replied, "Yes," to which he responded by offering a low price, believing it would bring him blessings.

The horn speaker (TOA) was selected as the primary artistic object in the Bibitulit installation series, not merely for its distinctive physical form but for its symbolic significance. With its trumpet-like shape, sturdy yet lightweight design, and widespread presence in Indonesia's public spaces, the TOA embodies the integration of people's technology into the socio-cultural landscape. The Bibitulit series repositions the TOA as a medium that embodies power relations and social dynamics, exploring its role in shaping acoustic experiences and public perceptions.

The TOA is not merely perceived as a technical device, but as an ideological medium. It commands public spaces with unquestionable authority. In Bibitulit, I position the TOA as an artifact of power that warrants examination and redefinition through artistic practice.
My interest in the TOA emerged from personal experiences, such as on a Christmas Eve that coincided with a major Islamic holiday. Living near a mosque, I heard a sermon broadcast through the TOA urging Muslims not to extend Christmas greetings. As a Muslim, I was surprised and reflected on how Christians must feel during their sacred celebration. I began to wonder: what if a similar situation occurred during Eid al-Fitr, with prohibitions coming from another religion? This experience marked a turning point in my understanding of the TOA—not merely as a messenger, but as a tool of domination operating without negotiation.

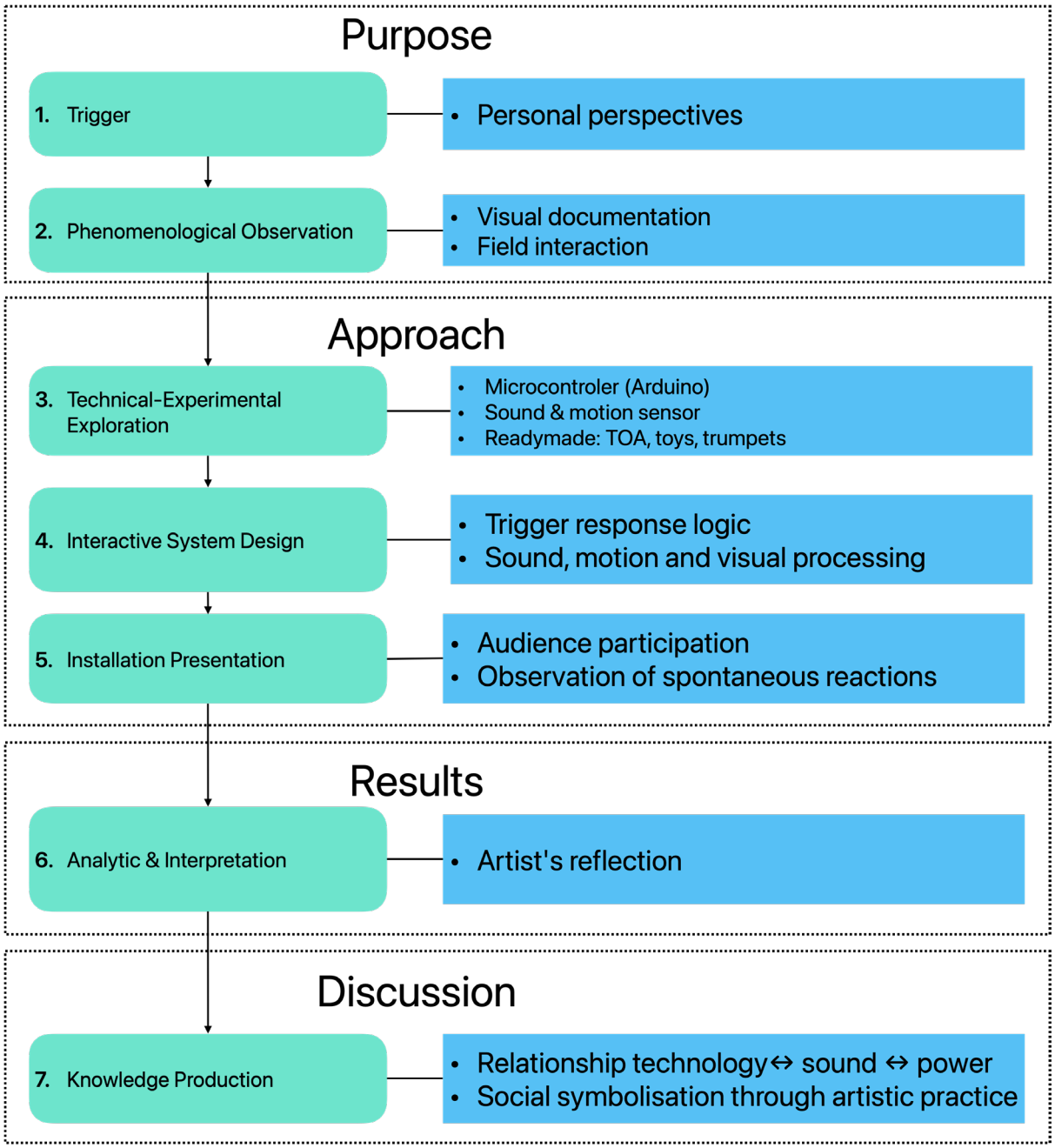
Figure 1 *Use of horn speakers installed atop a mosque dome in Medan (North Sumatra) as part of a sound system for the call to prayer and religious announcements.*

Note. Photo by Moch. Hasrul (2025).

Furthermore, the TOA is part of what I call "people's technology," a communication tool present in the everyday lives of Indonesians: from mosques and street vendors to campaign vehicles. Its familiarity renders it an affordable yet potent symbol of domination. This prompted me to reflect: who holds the right to voice? How is sound used as a strategy of control?

My solo exhibition featuring seven Bibitulit series works at Kedai Kebun Forum deepened this reflection. A shopkeeper shared that her child had difficulty sleeping because the sound from the artwork kept "playing in her head." Sound affects both physical and psychological aspects. In my work, the TOA penetrates consciousness not through logic, but through echoes resonating within the audience's body: as psycho-acoustic residues of inaudible yet persistent power relations.

Figure 2 Summary of Bibitulit process flow.



Note. Created by Moch. Hasrul (2025)

Initially, I viewed the TOA as a symbol of collective strength. However, through research and artistic creation, this meaning shifted: the TOA emerged as sound control technology that regulates space, perception, and even the boundaries of social consciousness. My artistic practice became a means to deconstruct this power and reintroduce it as critical discourse within the art space.

Aligned with McLuhan's (1971) concept that technology shapes social perception, within this framework, the TOA or horn speaker emerges as one of the prominent technological objects in Indonesian society due to its multifunctional role and strong symbolism in public spaces. Echoing Marianto's (2017) emphasis on the need for reflective interpretation of reality,

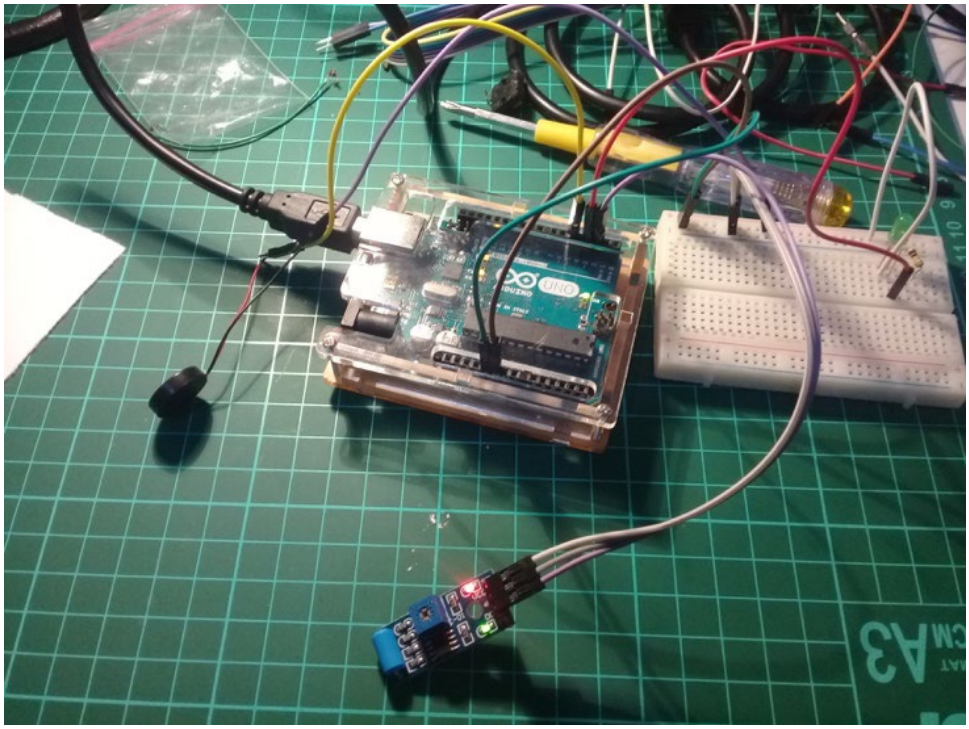
Bibitulit positions artistic practice as a means to interrogate and dismantle structures of power embedded in the auditory realm. Through this approach, the project contributes to expanding the role of contemporary art as a critical response to the politics of sound in multicultural societies.

Approach

Technology as Interactive Infrastructure in Bibitulit Works

The Power of Bibitulit is the first work in this series where I explored the use of sensors and microcontrollers to introduce interactivity. The initial concept centered on using the TOA as the primary visual element in the installation.

Figure 3 Early experiment using a vibration sensor and Arduino to trigger responses from drum interaction



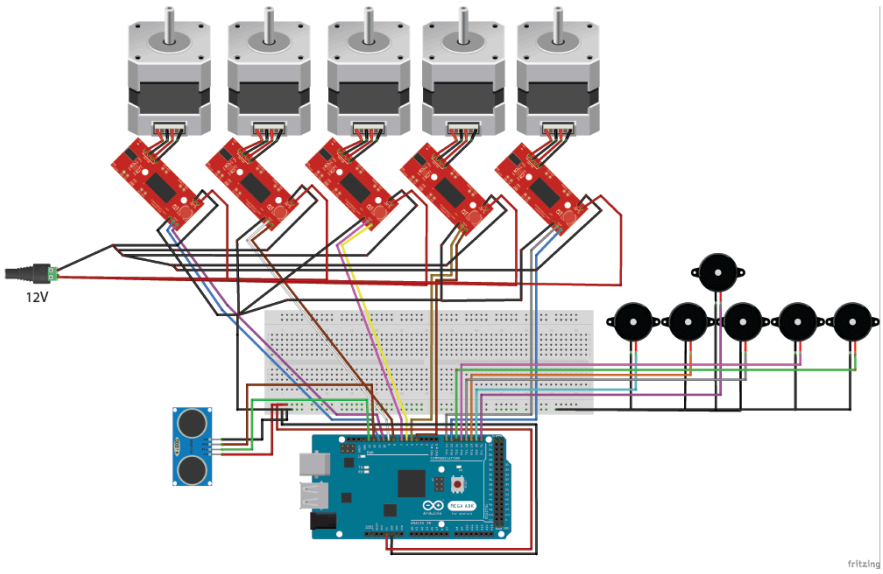
Note. Photo by Moch. Hasrul (2018)

As documented in Figure 3, the development process involved extensive trial and error, particularly in sensor selection. Vibration sensors were chosen, considering that the drum would be struck by the audience, producing detectable physical vibrations. Technically, sound sensors were feasible but were excluded due to potential acoustic interference. Positioned behind the drum and near the horn speaker, sound sensors risked capturing extraneous sounds, potentially causing uncontrollable feedback loops that would disrupt the interactive system and diminish the participatory experience.

In *In the Midst of Chaos, There is Also Bibitulit*, I used sound sensors to trigger the movement of a modified toy tank and created a mini horn speaker using 3D printing technology. This process was the result of five months of independent experimentation and hands-on learning, including the assembly of Arduino-based microcontroller systems, programming with Java-based Arduino IDE, and selecting batteries and electronic components suited to the toy's power needs and spatial constraints.

Mechanically, the tank's movement retains the toy's original drive system; the work does not alter its mechanical construction but replaces the existing electronic components with a programmed microcontroller and sensor circuit. The installation operates on a cause-effect logic: when the sensor detects a striking sound, the toy tank's motor and speaker activate simultaneously, generating movement and sound that create a structured chaotic atmosphere for several seconds. This structured chaos emerges from the programmed synchronization of multiple tanks, each responding to the same input with random movement and sound. The tanks move and collide unpredictably, yet the overall system maintains a rhythmic pattern determined by the sensor input and programmed response, blending the order produced by the drumbeat pattern with the randomness of the tank movements within the installation.

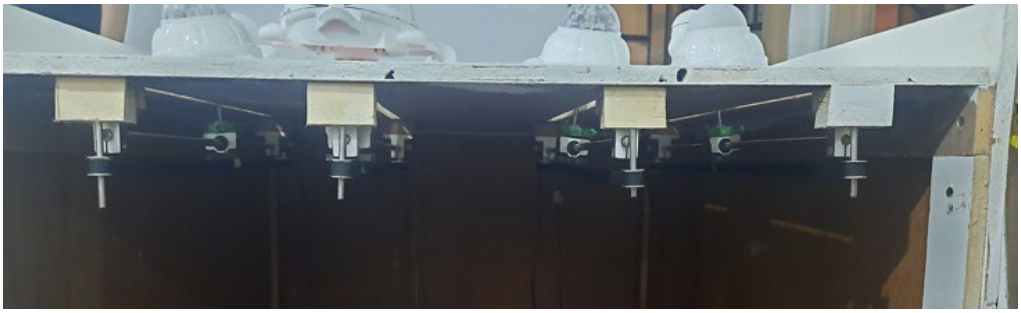
Figure 4 Schematic of the interactive system in In Matters of Bibitulit, There Can Be Distortion, illustrating stepper motors, sensors, and Arduino-based control.



Note. Photo by Moch. Hasrul (2018)

In *In Matters of Bibitulit, There Can Be Distortion*, ultrasonic sensors control a stepper motor that rotates the horn speaker up to 180 degrees, emitting layered sounds with different pitches from each speaker. This system was developed through experiments assessing the load-bearing capacity of the stepper motor to support the horn speaker and assembled with components such as microcontrollers, sensors, servos, and other electronic devices. The program was adapted from open-source scripts sourced from the internet and modified to meet the performative needs of the work. Each sensor activation triggers rotation, sound, and directional changes, creating a symbolic narrative about information distortion. Various electronic devices and schematics are depicted in figure 4.

Figure 5 Row of stepper motors driving synchronized rotational movement of turtle toys in Age of Bibitulit.

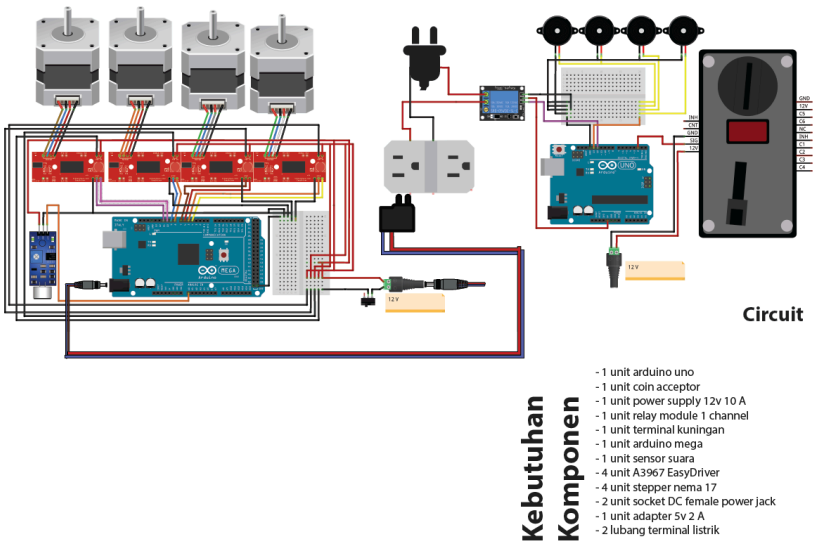


Note. Photo by Moch. Hasrul (2018)

The development of *Age of Bibitulit* continues the technical exploration initiated in *In Matters of Bibitulit, There Can Be Distortion*. Although both works employ similar electronic components, such as stepper motors, they differ significantly in mechanical aspects. In *Age of Bibitulit*, the stepper motor is connected to a lever and shaft system driven by a belt, enabling simultaneous movement of the turtle toys mounted atop the system. As shown in Figure 5, beneath the installation stage, several stepper motors are linked to a horizontal shaft that precisely controls the rotational movement of these toys.

This mechanism introduces new technical dynamics, forming rhythmically coordinated movements both technically and symbolically. Technically, this movement pattern is generated by the synchronization of mechanical components and the electronic control system, creating a consistent rhythmic pattern rather than mere random motion. Symbolically, the seemingly harmonious rhythmic movements suggest a narrative about how capital power—here symbolized by coins—can regulate, control, and create an illusory order within social life. Thus, *Age of Bibitulit* not only presents mechanical complexity but also offers a critical reflection on the relationship between technology, control, and social representation.

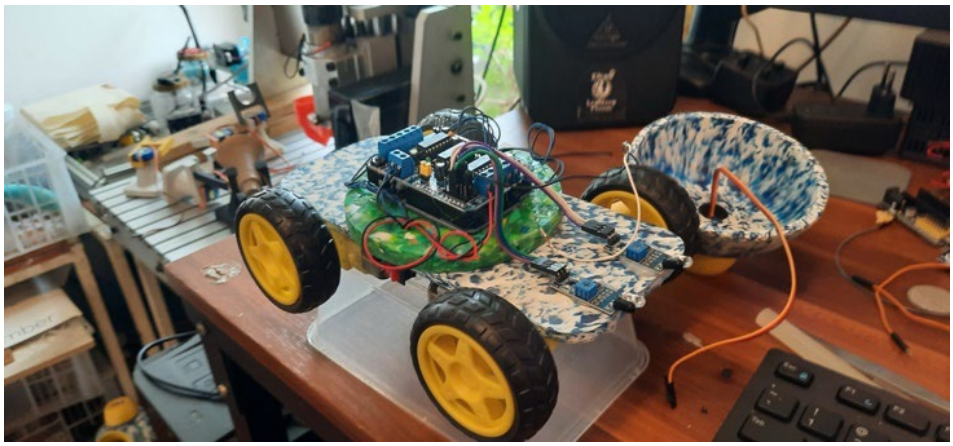
Figure 6 Circuit setup of Age of Bibitulit with Arduino, coin acceptors, sensors, and stepper motors for synchronized control.



Note. Photo by Moch. Hasrul (2018)

Figure 6 illustrates the electronic mechanism of the installation and lists the components needed. The system is activated for 30 seconds upon the insertion of a coin. During this interval, a stepper motor initiates rotation, while sound from the buzzer speaker is generated in response to audio input detected by a sound sensor.

Figure 7 Electronic component assembly for the Grumpi piece.



Note. Photo by Moch. Hasrul (2021)

A similar approach is applied in Grumpi, a technical successor to In the Midst of Chaos, There is Also Bibitulit. The successful modification of a plastic toy tank—utilizing its factory-installed movement system and replacing its electronic circuitry with a programmed microcontroller—served as a foundation for further technical development. In fact, in Grumpi, the entire system, including mechanical movement and electronic circuitry, is independently constructed without relying on factory components, unlike the use of plastic toys.

The movement system is designed using DC motor modules equipped with gearboxes, mounted beneath a chassis made from recycled HDPE plastic by my self. The electronic system is developed using Arduino devices and shield modules that allow simultaneous control of four DC motors. The entire microcontroller circuit and its components are placed atop the chassis, then enclosed by a dome-shaped cover made from recycled HDPE plastic.

The primary difference between Grumpi and In the Midst of Chaos, There is Also Bibitulit lies in technical aspects: in Grumpi, the system design is initiated from scratch, making the assembly and placement of electronic components more flexible, as elements can be freely arranged according to the work's design and performativity requirements.

Through a series of technical explorations evolving from one work to another, *Bibitulit* demonstrates how artistic practice can embrace technology as a conceptual infrastructure that shapes both aesthetic and critical experiences. Each interactive system designed—whether using sensors, microcontrollers, or movement mechanisms—not only serves as a presentation medium but also establishes cause-effect relationships that guide audience participation toward awareness of hidden power structures in everyday life. The rotational movement of the stepper and the sounds with different pitches represent information distortion, the coin-based trigger symbolizes capital as a system initiator, the audience's shouts act as a catalyst resembling cheering in competition, while the drum beats represent interruptions or attempts to stop. This has been deliberately constructed to facilitate the ideas within these works, creating interactive experiences that are not only visual and mechanical but also imbued with critical reflections on power relations in life. A deeper explanation of this reflection will be discussed in the results section.

Ultimately, all works in Bibitulit form input-output systems functioning as socio-political metaphors—from simulations of domination to representations of pseudo-participation. The TOA no longer merely produces sound but acts as an active agent creating participatory experiences, fostering critical awareness, and opening interpretive spaces on how sound operates as a control technology within society.

Results

Explanation of the Concept of the Bibitulit Body of Works

Figure 8 The Power of Bibitulit Installation

Note. Photo by Moch. Hasrul (2017).

The Power of Bibitulit is an interactive installation that explores horn speakers (TOA) as symbols of sound dominance in Indonesia's public spaces. Inspired by everyday realities, this work reconfigures the relationship between sound, power, and public participation through interactive strategies and sonic repetition.

The work presents several horn speakers, and an iron drum made out a barrel mounted on a metal scaffolding and a wooden. The TOAs simultaneously emit a distinctive, loud sound that saturates the space. Striking the drum halts the TOA sound for a few seconds, but immediately afterward, the TOAs resume with louder and more chaotic sound. This interaction creates a continuous cycle of disturbance and response.

Rather than producing silence or structural change, audience intervention generates new, more dominant, and shocking noise. In this context, the work critiques how attempts to interrupt existing noise with louder sounds merely add new layers of noise, while the old noise persists. This reflects how forceful interjection not only fails to silence the old sound but also reinforces the cycle of noise and power that is difficult to break.

Figure 9 Vox Populi, Vox Bibitulit Installation

Note. Photo by Moch. Hasrul (2017).

Vox Populi, Vox Bibitulit is an installation that explores the power of collective sound as a form of political expression in contemporary Indonesian society. It was inspired by the massive demonstrations in Jakarta in 2016, which were sparked by a speech by Jakarta Governor Basuki Tjahaja Purnama—who happened to be non-Muslim—that was perceived by some groups as blasphemy for quoting a verse from the Qur'an. This work represents how mass voices can serve as tools of resistance and new pressure within socio-political dynamics.

Visually, the installation places several horn speakers (TOA) atop a scaffolding mounted on a pickup truck bed, facing a single chair positioned at the center of the space. The audio system, programmed via microcontroller, plays loud sounds randomly and gradually, creating an atmosphere of intense sound pressure. Audience members sitting in the chair cannot escape the sound assault; in fact, the noise intensifies when they sit, creating an auditory experience that is both physically and psychologically challenging.

The interaction requires activation by sitting in the chair and also generates emotional engagement: the public is positioned as an authority figure experiencing public pressure from the unstoppable collective sound. With the escalating sound cycle, the work illustrates how anyone seated as an authority figure still receives the sound generated by the people. *Vox Populi, Vox Bibitulit* invites the audience to reflect on their position within the landscape of political noise: are they part of the voicing crowd, or merely targets of the sound itself?

Figure 10In the Midst of Chaos, There is Also Bibitulit Installation

Note. Photo by Moch. Hasrul (2018)

In the Midst of Chaos, There is Also Bibitulit reflects the reality that horizontal conflicts within society do not arise on their own but are always instigated by certain parties. In this work, the simple action of the audience striking an iron drum becomes a metaphor for the hidden hands that provoke and spread chaos, ultimately dividing society. When the drum is struck, the chaos begins, illustrating how fragile peace can be shattered by a small push. The recurring cycle of the toy tanks' movement and the blaring TOA sound symbolizes how every society today also has its own "weapons"—conflicts that, though seemingly trivial, can be triggered repeatedly to create chaos that is difficult to stop. In this way, the work invites the audience to reflect on their position within the circle of conflict: as instigators, victims, or part of the conflict itself.

In the Midst of Chaos, There is Also Bibitulit symbolically presents the iron drum as the trigger of conflict, toy tanks as militant entities that can be quickly mobilized, and horn speakers as representations of how communication technology transforms into a destructive discourse weapon. This work highlights social issues related to conflict triggers, artificial conflicts created for political gain, and the role of individuals in participating in conflict. Through seemingly light interactions with intimidating sonic and visual impacts, the work raises audience awareness of the importance of social responsibility in facing the flow of manipulated information. Hate speech can easily spark such artificial conflicts, and individuals play a crucial role in responding to violence. This idea is conveyed through sensor-based and auditory interactions that demonstrate the potential for participation—whether as instigators or observers—while emphasizing the need for critical awareness and social responsibility. Ultimately, the work raises the question: to what extent are we aware of each mechanism of artificial conflict that occurs?

Figure 11 In Matters of Bibitulit, There Can Be Distortion Installation

Note. Photo by Moch. Hasrul (2018).

In Matters of Bibitulit, There Can Be Distortion is an interactive installation reflecting on how information can undergo distortion during its reproduction in public spaces. Inspired by the Meiliana case in Tanjung Balai mentioned above (please explain above), this work constructs a sonic and visual experience simulating the process of meaning deviation due to information twisting by power, media, or public opinion.

The work features seven TOA units arranged linearly, from the largest to the smallest. The first and largest TOA remains stationary and emits the initial sound with a loud and stable tone. The other six TOAs respond alternately, each with gradually increasing pitch and rotating 180 degrees. The rotation and pitch changes are controlled via an Arduino microcontroller system that regulates the rhythm and sequence of sounds. This interaction creates the impression of information distortion, from the original sound to increasingly unstable echoes.

Rather than merely being an audio installation, this work invites the audience to realize how narratives can change through repetition and dissemination. From an initially neutral sound, information undergoes distortion, eventually creating a new, biased version. This work serves as a metaphor for how opinions can be manipulated, used as tools of justification, and even employed to criminalize individuals or certain groups—as often happens when framing or public discourse is directed to legitimize particular actions. In a society increasingly noisy with opinions and framing, this work invites reflection: are we still capable of recognizing the undistorted voice of truth—if the truth itself is increasingly obscured by echoes constantly being twisted?

Figure 12 Age of Bibitulit Installation

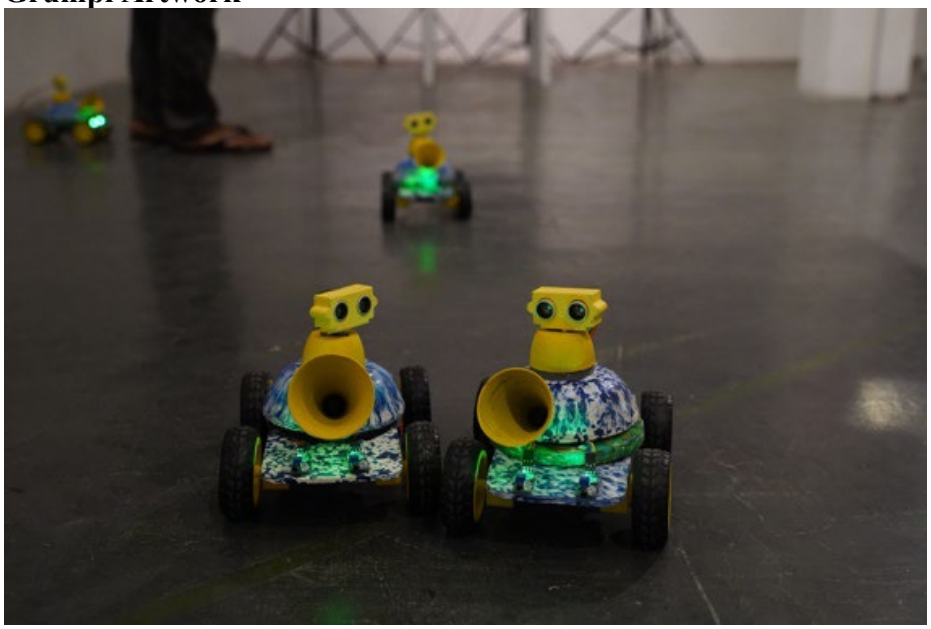
Note. Photo by Moch. Hasrul (2018).

Age of Bibitulit is an interactive installation simulating social competition as a mechanically conditioned system and questioning how horizontal conflicts are often engineered for power interests. The installation consists of a rectangular arena with five straight lanes serving as tracks for plastic toys—some shaped like turtles, others as toy cars—each equipped with mini horn speakers (TOA). On the front side of the arena, there is a coin slot where the audience have to pay Rp. 1000,- to activate the system.

After the game is started, the audience needs to cheer on the toys (i.e. make as much noise as possible) to make them move forward. As soon as the cheering stops, the toys will move back. Meanwhile, some other cars equipped with TOAs will light up and move without relying on audience interaction. The entire system will stop and become inactive until the next coin is inserted. This pattern creates an absurd and noisy interaction cycle—reflecting the dynamics of social competition that are unequal and systematically manipulated.

Through the symbolism of the thousand-rupiah coin as a spark of capital, this work highlights how conflict can occur because society, consciously or not, contributes capital to create the contest. Turtle toys as social actors mobilized by audience shouts, and mini TOAs as noise dominating public spaces, form a metaphor for how public participation is often trapped within systems deliberately designed to provoke conflict for greater interests. *Age of Bibitulit* invites the audience to reflect: are we truly participating with full awareness, or are we merely part of a contest ignited by capital?

Figure 13 Grumpi Artwork



Note. Photo by Moch. Hasrul (2022).

Grumpi is an interactive installation cr
itiquing the phenomenon of digital buzzers and the manipulation of public opinion in online spaces. This work features five small robot units shaped like vehicles with plastic camouflage, each equipped with mini horn speakers continuously emitting disruptive sounds. These robots are programmed using microcontrollers to automatically follow moving objects in front of them, creating an intense physical and auditory experience for the audience.

When the audience approaches, the Grumpi robots immediately detect movement and chase them, colliding at high speed while continuously emitting noisy sounds. This experience illustrates how social media buzzers operate: they are aggressive, without clear identity, and they provide no room for dialogue. The symbolism of small vehicles as disguised entities, horn speakers as representations of digital propaganda disturbances, and automatic sensors as metaphors for algorithms operating beyond human control, reinforces the message of this work. Grumpi raises important issues about how digital disturbances have transcended virtual boundaries and have real psychological and social impacts. Through this direct experience, the work emphasizes the urgency of media literacy and digital ethics, encouraging the audience to recognize the importance of safeguarding online spaces from systemic and ‘invisible’ yet very real chaos.

Figure 14 If You Obey All the Rules, You Miss All the Bibitulit Installation

Note. Photo by Moch. Hasrul (2022).

If You Obey All the Rules, You Miss All the Bibitulit is an interactive installation that explores the phenomenon of blind obedience to authority. In this work, several brightly coloured mini horn speakers are 3D-printed and mounted on servo stands that allow them to automatically bow toward the audience. Each speaker is equipped with a distance sensor that triggers the bowing motion when someone approaches. Placed around pillars or columns, these TOAs appear to show respect or acknowledgment to the audience, but in a mechanical and pre-programmed manner.

This gesture creates an ambiguous symbolic experience: on the one hand, the TOAs seem friendly and submissive, yet on the other, they continue to emit dominant sounds that cannot be interrupted. The work visualizes how, in modern society, authority can present a friendly face while still instilling control. The TOAs bowing to 'honour' the audience is not a product of consciousness but the result of a pre-programmed automatic system.

This piece raises issues about the symbolic mechanisms of power that appear accommodating but actually reinforce dominance, as well as the lack of critical awareness in society toward socio-political structures. Through this installation, the audience is invited to reflect on their role in facing authority: are they thinking subjects, or passive bodies accepting symbolic interactions without questioning the intentions and structures behind them?

Figure 15 The Game is Not Lost or Won Until the Last Bibitulit Goes

Note. Photo by Moch. Hasrul (2023).

The Game is Not Lost or Won Until the Last Bibitulit Goes (2023) is an interactive installation that highlights the imbalance of sound within social structures and the struggle of minority voices to be heard amid dominant power. The work constructs two sonic layers—sound from above representing established authority, and sound from below symbolizing grassroots voices—which clash in intensity within a shared installation space. Horn speakers are positioned both overhead and at ground level, creating a spatial experience that invites the audience to compare the directionality and power of sound.

On the other hand, the audience is provided with squeeze horns they can play, representing a form of participatory expression from below, striving to counteract the dominance of sound from above. The interaction unfolds as the audience moves freely within the space, listening to sounds from various directions, and gradually begins to play the horns to amplify the noise from the lower tier.

This spatial disparity of sound acts as a metaphor for social hierarchy, wherein minority voices are often relegated to the background rather than brought to the forefront. The symbolism of the TOA above as authority, the TOA below as a voice of resistance, and the squeeze horns as a collective voice that must be asserted, frames the installation as a critique of unequal systems of representation. The work underscores the importance of inclusivity and the recognition of marginalized voices, urging us to question: does our social system truly allow all voices to be equally heard?

Artwork Analysis: Case Studies from the Bibitulit Body of Works

Building upon the previously discussed ideas and conceptual frameworks of the *Bibitulit* series, this section offers an in-depth analysis of the eight artworks produced between 2017 and 2023. The analysis systematically examines the main themes, key symbols, forms of interactivity, and social issues embedded in each piece. The following table provides a comprehensive overview of the *Bibitulit* body of works, highlighting their critical engagement with the interplay between sound, people's technology, and power structures within Indonesia's public spaces.

The table below presents a structured analysis of the eight works in the *Bibitulit* series, outlining their main themes, key symbols, forms of interactivity, and the social issues they address. These categories were developed to systematize the understanding of each work's

conceptual framework and its critical engagement with sound, technology, and social dynamics in public spaces. The choice of categories stems from close observation and analysis of each work's aesthetic, technological, and socio-political dimensions. By presenting this information in a comparative format, the table reveals thematic continuities and variations across the series, illustrating how each piece builds upon or diverges from the central motifs of sound, control, and resistance. This summary is not merely a classification of elements but also a tool for readers to recognize the layered meanings and structural critiques embedded in the *Bibitulit* series.

Table 1 **Analytical Description of Works in the Bibitulit Series Based on Theme, Symbolism, Interactivity, and Social Issues**

Title	Main Theme	Key Symbols	Form of Interactivity	Social Issues
The Power of Bibitulit	Sound domination in public spaces	TOA, metal drum	Striking the drum temporarily halts the TOA	Critique of sound as a tool of power and social control
Vox Populi, Vox Bibitulit	Collective pressure and political participation	TOA, single chair, scaffolding, pickup truck bed	Sitting on the chair triggers intense sound	Mass voice as a tool of pressure and new domination
In the Midst of Chaos, There is Also Bibitulit	Hate speech and horizontal conflict	Metal drum, toy tanks with TOA	Striking the drum activates tanks and TOA sounds	Critique of conflict manipulation through propaganda
In Matters of Bibitulit, There Can Be Distortion	Information distortion in public spaces	TOAs of varying sizes, stepper motor	Proximity sensor triggers TOA rotation and sound changes	Meaning distortion in information dissemination
Age of Bibitulit	Social competition and manipulation of participation	Toy turtles and cars, coins, TOA	Coins + audience noise trigger toy movement	Engineered public participation systems
Grumpi	Buzzer algorithms and digital disruption	Small robot with mini TOA	Motion sensor triggers robot to chase audience	Manipulation of public opinion and digital chaos
If You Obey All the Rules, You Miss All the Bibitulit	Symbolic obedience to authority	Bright-colored TOA, servo, proximity sensor	TOA bows when audience approaches	Critique of seemingly accommodating yet dominant authority
The Game is Not Lost or Won Until the Last Bibitulit Goes	Sound inequality and minority struggles	TOAs above and below, toy trumpet	Blowing the trumpet triggers sound from below	Hierarchy of sound and unequal social representation

Note. Created by Moch. Hasrul (2025)

Discussion

Patterns of Social Representation in the Bibitulit Series

Among the eight works in the *Bibitulit* series, a set of recurring representation patterns emerge, revealing the complex interplay between sound, people's technology, and power in Indonesia's public spaces. These patterns are not immediately apparent but are the result of detailed analysis involving close observation, comparison, and critical reflection on each artwork's conceptual framework, symbolic elements, interactive forms, and socio-political contexts. By integrating documentation of the works' material and aesthetic qualities with considerations of broader cultural and political discourses, this discussion sheds light on how recurring motifs—from interactivity as political metaphor to sound as an epistemic medium—illustrate the entangled dynamics of power, control, and participation in contemporary society.

Interactivity as Political Metaphor

Works like *Age of Bibitulit* (2018) and *Grumpi* (2021–2022) employ interactive systems not merely to engage audiences but to reveal how public participation is often manipulated by pre-structured systems. In *Age of Bibitulit*, audience-generated noise is required to move the toy forward, but only if the system is activated by a coin, depicting how social systems artificially mobilize the public. In *Grumpi*, a small robot automatically chases the audience, reflecting the algorithmic behavior of buzzers that attack randomly and without negotiation—participation occurs but is choreographed.

Distortion and Ambiguity as Aesthetic and Critical Strategy

In Matters of Bibitulit, There Can Be Distortion (2018) directly utilizes sound distortion as a metaphor for information deviation. The TOA is programmed to play sounds with increasing pitch as it rotates, creating an echo effect that diverges from the original sound. This distortion serves not only as a visual and sonic strategy but also as a conceptual approach to demonstrate how public opinion, media, or power can warp messages until they lose their original meaning. Ambiguity becomes part of the critique: the audience is no longer certain which sound is authentic.

People's Technology as Ideological Symbol

TOAs, squeeze horns, and coin acceptors in these works are elevated not merely as media or technical apparatuses, but as symbols of power embedded in everyday practice. In *The Power of Bibitulit* (2017), the horn speaker becomes an inescapable sonic instrument, representing authority that cannot be interrupted. Meanwhile, in *If You Obey All the Rules, You Miss All the Bibitulit* (2022), the gesture of a bowing TOA ironically symbolizes a form of power that appears accommodating but remains controlling. The deployment of mundane objects emphasizes how ideology infiltrates through familiar, 'populist' forms, challenging the audience to interrogate how everyday tools become vectors of influence and compliance.

Space and Sound as the Power Structure

In *The Game is Not Lost or Won Until the Last Bibitulit Goes* (2023), sound is orchestrated across two spatial layers—upper and lower soundscapes—to construct a visual and auditory metaphor of social hierarchy. The elevated placement of the TOA represents the dominance of institutionalized power, whereas the sounds from below (emanating from audience-held horns) can only be heard when actively amplified. This spatial distribution of sound acts as a signifier of representational inequality, highlighting how social structures operate through directional, volumetric, and positional dynamics of sound.

Participation as Covert Control

In *Vox Populi, Vox Bibitulit* (2017), a hidden switch embedded in a chair triggers the sound system. When the audience sits, the TOA's output becomes increasingly intense and overwhelming. Here, participatory experience becomes a mechanism of pressure: the audience cannot halt the sound, and their physical presence inadvertently activates aural domination. This kind of interaction portrays how control in public spaces is often subtly woven into daily encounters that appear benign or passive, thereby revealing participation as a form of orchestrated subjugation.

Sound as an Epistemic Medium

Across the *Bibitulit* series, sound emerges not only as an aesthetic element or communicative tool but also as an epistemic medium—it shapes how things are understood, accepted, or rejected within the social sphere. From the inescapable voice of *The Power of Bibitulit* (2017) to the embattled minority voice in *The Game is Not Lost or Won Until the Last Bibitulit Goes* (2023), these works compel us to reflect on how sound structures knowledge, legitimizes authority, and silences multiplicity. In this context, sound acts as an agent of socio-political articulation, mapping/shaping the limits of thought and recognition in public discourse.

Conclusion

In the Bibitulit series, the TOA is not merely a technical object, but a symbol of sonic power that colors Indonesia's socio-political landscape. These works reveal how people's technology contains hidden hierarchies and control, while presenting a critical and participatory platform for reflecting on the relationship between sound, power, and representation in public spaces.

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