e-ISSN: 3026-7277

Enigma in Cultural

Journal website: https://enigma.or.id/index.php/cultural

The Acoustic City: Sonorous Landscapes, Urban Memory, and the Politics of Noise

Muhammad Hasan[1*], Jovanka Andina[2], Matilda Munoz[3], Emir Abdullah[4], Ahmad Erza[5]

[1]Department of Social Sciences, Enigma Institute, Palembang, Indonesia

[2]Department of Civil Engineering, CMHC Research Center, Palembang, Indonesia

[3]Department of Physics, Camphece Science Center, Campeche, Mexico

[4]Department of Constitutional Law, Sanskrit Institute, Jakarta, Indonesia

[5]Department of Criminal Law, Enigma Institute, Palembang, Indonesia

ARTICLE INFO

Keywords:
Acoustic ecology
Politics of noise
Sound studies
Urban memory
Urban soundscapes

***Corresponding author:**
Muhammad Hasan

E-mail address:
muhammad.hasan@enigma.or.id

All authors have reviewed and approved the final version of the manuscript.

https://doi.org/10.61996/cultural.v3i2.110

A B S T R A C T

The contemporary city is often conceived through a visual paradigm, yet its character is profoundly shaped by its acoustic environment. This study investigated the urban soundscape as a complex tapestry woven from sound, memory, and power. Focusing on the rapidly urbanizing context of Indonesia, this research explored how sonorous landscapes are produced, experienced, and contested, shaping collective urban memory and becoming arenas for political negotiation. A mixed-methods approach was employed, integrating qualitative ethnographic research with quantitative acoustic analysis. Fieldwork was conducted in two distinct Indonesian urban settings: the megacity of Jakarta and the historically significant city of Palembang. Methods included 60 semi-structured interviews with residents, urban planners, and community leaders; 30 researcher-led soundwalks using participant observation; and acoustic data collection using Class 1 sound level meters at 100 strategic locations. This data was used to create predictive acoustic models of selected neighborhoods using CadnaA sound prediction software to visualize and analyze sound pressure level (SPL) distribution. The findings revealed a rich acoustic lexicon unique to Indonesian cities, characterized by a dynamic interplay of religious sounds (the call to prayer or adzan), commercial vocalizations (street vendor calls), transportation noise, and sounds of community life (*gotong* royong). Ethnographic data demonstrated that these sounds are potent carriers of urban memory, evoking nostalgia and a sense of belonging, but are also sources of significant social friction. Acoustic models identified "sonorous hotspots" where SPLs consistently exceeded national health recommendations by up to 25 dBA, particularly around transport hubs and commercial districts. A significant disconnect was found between residents' subjective perception of noise and objective decibel measurements, highlighting the cultural mediation of sound. The "politics of noise" manifested in community-level disputes over the volume and timing of mosque loudspeakers and the perceived encroachment of commercial sounds into residential areas. In conclusion, the urban soundscape is not a neutral background but a contested social and political space where identities are asserted and power is negotiated. This study established that in Indonesian cities, sound acts as a crucial medium for constructing urban memory and a site for the subtle, everyday politics of cohabitation. Understanding these sonorous landscapes is essential for developing more inclusive and acoustically just urban planning policies that move beyond simple noise abatement to a more nuanced appreciation of the urban acoustic environment.

1. Introduction

The modern metropolis is an overwhelming sensorium, a relentless cascade of sights, smells, and sounds.[1] Within urban studies and planning, a persistent ocularcentrism has historically prioritized the visual—the city's architecture, layout, and aesthetic appeal—often relegating the acoustic environment to the periphery of academic and policy concern. The urban soundscape has typically been framed negatively, through the lens of "noise"—an

unwanted, disruptive, and pathological byproduct of urban life to be measured, managed, and mitigated.[2] This perspective, however, overlooks the profound role that sound plays in shaping urban experience, identity, and social relations. The acoustic environment is not merely a residual effect of urban activity but a dynamic medium through which the city is lived, remembered, and contested.[3] It is a text, rich with social and cultural meaning, that narrates the stories of a place and its people. The concept of the "soundscape," first popularized by R. Murray Schafer, offers a powerful analytical framework to move beyond the reductionist view of urban sound as noise. A soundscape is an acoustic environment as perceived or experienced by individuals or a community.[4] It comprises a complex layering of sounds: "keynotes" that form the constant background hum (such as traffic), "signals" that are consciously listened to (such as sirens or bells), and "soundmarks" that are unique, community-cherished sounds (such as a specific street vendor's call or a local festival's music). This framework allows for an investigation of the acoustic city not just as a physical phenomenon measurable in decibels, but as a cultural and social construct. The sounds of a city are imbued with meaning; they can foster a sense of belonging and continuity, evoke memories, and delineate social and cultural territories.[5]

In the context of the Global South, and particularly in the rapidly urbanizing nations of Southeast Asia, the study of urban soundscapes takes on a unique urgency and complexity.[6] Indonesian cities, for instance, present a compelling case study. They are characterized by extreme density, a vibrant and often chaotic street life, and a rich cultural and religious tapestry that is audibly expressed in the urban environment. The daily soundscape is a dense amalgamation of the mechanized roar of motorcycles, the ubiquitous calls of street vendors (pedagang kaki lima), the rhythmic sounds of neighborhood life, and, most prominently, the five-times-daily Islamic call to prayer (adzan) broadcast from thousands of mosques (masjid).[7] This acoustic complexity challenges simplistic Western-centric models of noise control and demands a more culturally nuanced understanding of how sound is produced, perceived, and valued. Furthermore, the urban soundscape is rarely a harmonious symphony; it is often a site of conflict and negotiation.[8] Whose sounds have the right to dominate the acoustic space? How are decisions about sound—its volume, duration, and timing—made and enforced? This is the "politics of noise," a term that refers to the ways in which sound and its regulation become entangled with power relations, social hierarchies, and competing claims to urban space.[9] In Indonesia, these politics manifest in various forms, from neighborhood disputes over the volume of mosque loudspeakers to municipal regulations aimed at curbing the noise from street racing or entertainment venues. These conflicts reveal that sound is not merely an aesthetic or environmental issue but a deeply political one, reflecting broader social tensions over public space, religious expression, and the very definition of a "good" urban life.[10]

This study, therefore, situated itself at the intersection of urban studies, sound studies, and cultural geography to investigate the multifaceted role of sound in shaping contemporary Indonesian cities. It moved beyond a purely technical analysis of noise pollution to explore the soundscape as a lived, remembered, and contested phenomenon. By examining the sonorous landscapes of Jakarta and Palembang, this research sought to understand how specific acoustic environments contribute to the formation of urban memory, how residents navigate and negotiate a complex and often cacophonous sound world, and how sound becomes a medium for the assertion of power and identity. The novelty of this research lies in its integrative mixed-methods approach, which synergizes qualitative ethnographic inquiry with quantitative acoustic modeling to provide a holistic analysis of the urban soundscape in a non-Western context. While previous studies have often treated the soundscape as either a purely physical phenomenon (acoustic engineering) or a purely cultural one (anthropology), this study bridged that divide. By combining soundwalks and interviews with computational acoustic mapping, it offered a unique, multi-scalar perspective that connects the lived, subjective experience of sound to its objective,

physical characteristics and spatial distribution. Furthermore, much of the foundational literature in sound studies has been based on European and North American cities. This research contributed a crucial perspective from the Global South, specifically Indonesia, challenging universalist assumptions and highlighting the culturally specific ways in which sound is produced, perceived, and politicized. The primary aim of this study was to comprehensively analyze the urban soundscape of selected Indonesian cities as a nexus of memory, social life, and power. Specifically, the study sought to:Identify and document the key "soundmarks" that define the acoustic identity of Jakarta and Palembang and explore their role in the construction of collective urban memory; Investigate the "politics of noise" by examining how different social actors and communities negotiate, contest, and regulate the urban acoustic environment; Combine subjective perceptual data with objective acoustic measurements and computational models to map the sonorous landscapes of the case study areas and identify discrepancies between perceived annoyance and measured sound pressure levels; Contribute to a more nuanced theoretical framework for understanding urban soundscapes that can inform culturally sensitive and socially just urban planning and noise management policies in Indonesia and other similar urban contexts.

2. Methods

This study employed a convergent mixed-methods design, which involved the concurrent collection and analysis of qualitative and quantitative data to develop a comprehensive understanding of the urban soundscape in Indonesia. This approach allowed for the triangulation of findings, where the rich, contextual insights from ethnographic methods could be corroborated and spatially contextualized by acoustic measurements and predictive models. The research was conducted between March 2023 and July 2024 in two distinct Indonesian cities: Jakarta, the sprawling and densely populated capital megacity, and Palembang, a major regional and historical city in South Sumatra. These sites were chosen to provide a comparative perspective between a global metropolis and a secondary city with a strong local identity. Within each city, two neighborhoods were selected as primary research sites based on their contrasting characteristics: a high-density informal settlement and a planned middle-class residential area.

The qualitative component was designed to capture the lived experience and social meanings of the urban soundscape. The primary methods included semi-structured interviews and soundwalks. Semi-structured Interviews: A total of 60 in-depth, semi-structured interviews were conducted (30 in Jakarta, 30 in Palembang) with a diverse range of participants. Purposive and snowball sampling strategies were used to recruit participants, including long-term residents of different age groups and socioeconomic backgrounds (n=40), community leaders (Ketua RT/RW) (n=10), and municipal officials involved in urban planning and environmental regulation (n=10). Interviews were conducted in Bahasa Indonesia, lasted between 60 and 90 minutes, were audio-recorded with consent, and were transcribed verbatim. The interview protocol was designed to explore themes such as participants' daily acoustic routines, memories associated with specific sounds, perceptions of pleasant versus unpleasant sounds, experiences of noise-related conflicts, and opinions on sound regulation. Soundwalks: Thirty soundwalks were conducted with a subset of resident participants (15 in each city). A soundwalk is a guided walk through a specific area with a focus on active listening and discussing the acoustic environment. Each soundwalk lasted approximately 45-60 minutes and followed a route co-designed with the participant through their neighborhood. During the walk, participants were prompted to identify significant sounds, describe their feelings and associations with the acoustic environment, and point out areas they considered particularly noisy or quiet. The researcher took detailed field notes and audio recordings of the ambient soundscape and the conversation. This method provided rich, in-situ data on how the soundscape is experienced and navigated in real-time. Qualitative Analysis: The transcribed interviews and field notes from the soundwalks were analyzed using

thematic analysis within the NVivo 12 software package. The analysis followed a six-phase process: (1) familiarization with the data, (2) generation of initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, and (6) producing the report. An inductive approach was primarily used, allowing themes to emerge directly from the data. Key themes identified included "Sound and Nostalgia," "The Adzan as a Structuring Element," "Commercial Vocalizations and the Informal Economy," and "Negotiating Acoustic Boundaries".

The quantitative component aimed to objectively measure and model the physical properties of the soundscapes in the selected neighborhoods. Acoustic Measurements: A grid-based sampling strategy was employed to collect acoustic data. Within the four selected neighborhoods (two in each city), a total of 100 measurement points were identified, ensuring representative coverage of different land uses such as residential streets, main roads, markets, parks, and areas near mosques. At each point, short-term (15-minute) sound pressure level (SPL) measurements were taken using a Brüel & Kjær Type 2250 Class 1 sound level meter. Measurements were conducted at three different times of day to capture diurnal variations: morning rush hour (07:00-09:00), midday (12:00-14:00), and evening (19:00-21:00). Key acoustic parameters were recorded, including the equivalent continuous sound level (), the maximum sound level (), and statistical levels (, ,). Meteorological conditions such as wind speed, temperature, and humidity were also recorded to ensure measurements were conducted under favorable conditions as per ISO 1996-2 standards. Acoustic Modeling: The collected acoustic data, along with detailed geographical information, were used to build and calibrate computational acoustic models for each neighborhood. Data on building footprints, heights, road networks, traffic volume (obtained from municipal transport departments and manual counts), and locations of major sound sources like mosques and markets were compiled in a GIS (Geographic Information System) database. This data was then imported into CadnaA (Computer Aided Noise Abatement), a state-of-the-art sound prediction software. The software uses standardized calculation models (like ISO 9613) to create predictive maps of sound propagation. These maps visualized the spatial distribution of (day-evening-night equivalent sound level), providing a comprehensive picture of the acoustic exposure across the entire study area, including locations where direct measurement was not feasible. The predictive models were calibrated by comparing the calculated SPL values with the measured values at the 100 sampling points to ensure the accuracy and reliability of the output. Quantitative Analysis: The quantitative data from both direct measurements and computational models were analyzed using descriptive and inferential statistics in SPSS version 28. This involved calculating average SPLs for different zones and times of day, comparing these levels against Indonesian national noise standards (Kep-48/MENLH/11/1996), and using GIS to identify "hotspots" of high acoustic energy. T-tests and ANOVA were used to assess statistically significant differences in sound levels between different types of urban spaces. In the final stage of analysis, the qualitative and quantitative datasets were integrated. This was achieved by overlaying the thematic findings from the interviews and soundwalks with the acoustic noise maps generated by the predictive models. For instance, areas identified by residents as particularly "annoying" or "chaotic" were compared with the corresponding values on the noise maps. This integration allowed for a critical examination of the relationship between subjective perception and objective measurement, revealing where they converged and diverged. It enabled a more nuanced interpretation, explaining why certain objectively loud areas might be perceived positively (a bustling market seen as vibrant) while other, less intense sounds might be the source of significant social conflict (a neighbor's air conditioning unit).

3. Results and Discussion

The ethnographic fieldwork revealed that the urban soundscape was a textured composition of distinct sounds that residents used to navigate, understand, and feel connected to their city. Certain sounds emerged consistently as powerful "soundmarks,"

acting as anchors for collective memory and identity. Figure 1 categorizes these key soundmarks, detailing their acoustic characteristics, the meanings ascribed to them by participants, and their function in shaping urban memory. The adzan was overwhelmingly the most significant soundmark, described not just as a religious call but as the fundamental temporal structuring element of daily life.[11] Its soundscape presence established a shared rhythm for the city's inhabitants, regardless of their personal piety. The vocalizations of the informal economy formed another critical layer. These were not generic shouts but a highly codified system of acoustic signals that residents could decode instantly, linking a specific sound to a specific vendor and product. The disappearance of these sounds due to urban formalization was a frequent point of lament, seen as an erasure of local culture. Finally, the keynote of traffic, particularly the ubiquitous motorcycle, was acknowledged as the defining sound of modernity—a symbol of both progress and perennial urban stress.

Figure 1. Key soundmarks and their role in urban memory in Jakarta and Palembang.

The quantitative analysis provided an objective counterpart to the qualitative findings, mapping the spatial and temporal distribution of sound pressure levels. The acoustic measurements confirmed that ambient sound levels across all sites were consistently high, frequently exceeding national and international guidelines. Figure 2 provides a summary of the average sound pressure levels recorded in different urban zones.

Figure 2. Summary of average daytime sound pressure levels (in dBA) by urban zone.

The predictive acoustic models generated detailed noise maps that visualized these findings spatially, identifying "acoustic hotspots" along transport corridors and within commercial centers. However, a crucial result emerged when integrating this objective data with the subjective experiences of residents: the perception of a sound as "noise" was not directly correlated with its decibel level. Figure 3 illustrates this disconnect by contrasting objective measurements with qualitative descriptions for specific, representative soundscapes. This clear divergence underscores that cultural context, information content, and social expectations are critical mediators in the transformation of physical sound into subjectively experienced noise. The same decibel level can be interpreted as either vibrant or disruptive, depending entirely on its source, meaning, and location.

Figure 3. Comparison of objective SPL and subjective perception for key soundscapes.

The study revealed that the urban soundscape was a contested terrain where different actors vied for acoustic dominance, and where social norms and power relations were actively negotiated through sound. These everyday acoustic struggles constituted a vibrant "politics of noise". Figure 4 outlines the primary arenas of conflict, the actors involved, and their competing claims over the soundscape. These conflicts demonstrate that sound is not merely an environmental byproduct but a medium through which power is asserted and social order is contested. The ability to produce sound that others are compelled to hear—whether it is the sermon from a mosque, the roar of a modified motorcycle, or the cry of a street vendor—is a tangible expression of social power.[12] Conversely, the struggle for quiet is often a struggle for social and spatial exclusion, an attempt to enforce class-based norms on the shared urban environment.

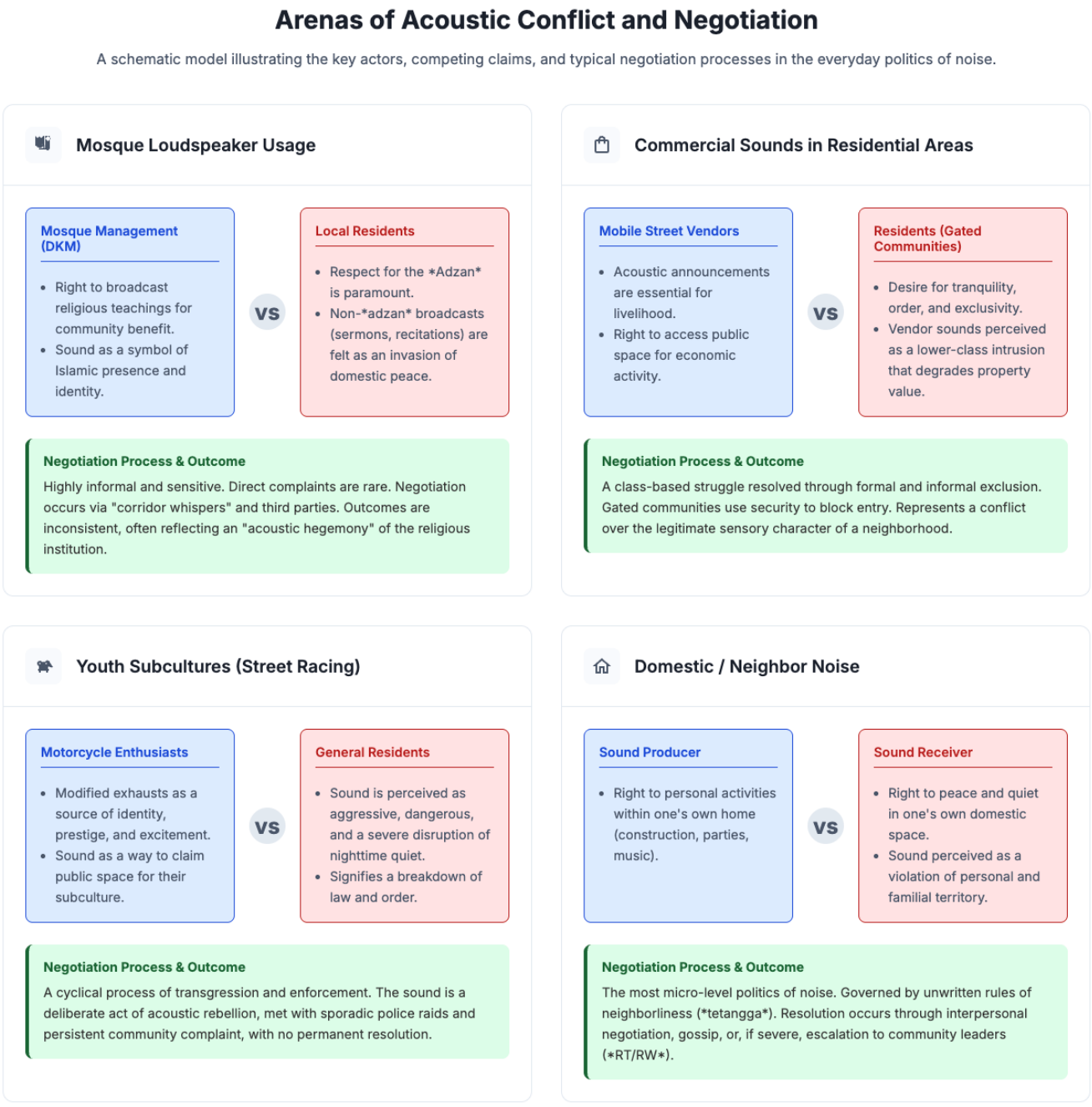

Figure 4. Arenas of acoustic conflict and negotiation.

The findings of this study provide a granular view of the Indonesian urban soundscape, revealing it as a complex interplay of memory, perception, and power. The analysis moves beyond a simple presentation of findings to a deeper theoretical engagement with the soundscape as a cultural and political artifact. The research findings powerfully illustrate that the urban soundscape functions as what can be termed an "acoustic palimpsest". A palimpsest is a manuscript page from which the text has been scraped or washed off so that the page can be reused, but where traces of the earlier writing remain.[13] The urban soundscape, particularly in a city undergoing rapid transformation like Jakarta or Palembang, operates similarly. It is a constantly overwritten surface, yet the echoes and traces of past acoustic worlds persist, creating a rich, layered, and often dissonant composition. This concept allows for a more dynamic understanding of urban memory than static notions of heritage. The persistent soundmarks of traditional street vendors, such as the *bakso* seller's percussive "ting-ting-ting," are remnants of a previous urban order—a more localized, pedestrian-oriented, and informal economy. As one older participant lamented the disappearance of these sounds, they were not just missing an auditory cue for food; they were mourning the erasure of a layer of the city's history, a texture of everyday life that is being overwritten by the homogenous roar of modern traffic and the curated playlists of shopping malls. These vendor calls are traces of a past acoustic inscription, analogous to the faint, underlying text on a palimpsest. This aligns with Maurice Halbwachs's theory of collective memory, which posits that memory is socially framed and anchored in the material world. Our findings suggest that these anchors are not only visual (monuments, buildings) but are profoundly acoustic. The soundmarks of the city are part of the "social frameworks of memory," and their erosion signifies a breakdown in the transmission of a certain form of urban cultural knowledge.[14]

Upon this older layer, new sounds are constantly being inscribed. The overwhelming presence of the motorcycle swarm is the dominant new text. It is the sound of modernity, of increased mobility, of a new economic reality. It is loud, aggressive, and often cacophonous, effectively scraping away the legibility of the older acoustic layers. Yet, the palimpsest is not fully erased. The vendor's call can still pierce through the traffic din; the sounds of community *gotong royong* can temporarily reclaim a street from the noise of commerce. The five-times-daily broadcast of the *adzan* represents the most powerful and enduring inscription on this palimpsest. It is both ancient and modern, a historical sound transmitted through contemporary technology like amplifiers and loudspeakers. It rhythmically overwrites all other sounds, imposing its own temporal and spiritual structure onto the city. The *adzan* doesn't erase the other layers but frames them, creating a recurring acoustic parenthesis in the urban narrative. Understanding the city as an acoustic palimpsest moves the discussion beyond a simple binary of "old versus new" or "noise versus quiet". It allows us to appreciate the sonic environment as a site of historical sedimentation. The tensions residents feel—the nostalgia for old sounds, the stress from new ones—are the direct result of trying to read this complex, multi-layered text. Urban planners and heritage professionals, who are traditionally focused on the visual and material, must learn to listen to this palimpsest. Preserving a city's character is not just about saving buildings; it is also about understanding and perhaps even curating these acoustic layers, recognizing that the erasure of sound is an erasure of memory.[15]

This study’s starkest finding is the profound disconnect between objective acoustic metrics (decibels) and the subjective experience of sound. This reinforces a central tenet of sound studies: "noise" is not a physical property inherent in a sound wave but a social and cultural construction. As scholar Murray Schafer famously stated, noise is simply "unwanted sound". The critical question, then, is who gets to decide what is unwanted? Our findings, particularly the celebration of the loud market soundscape as *ramai* (vibrant), provide a powerful case study in the cultural contingency of this definition. In many Western-centric environmental discourses, high decibel levels are axiomatically negative—a pollutant to be mitigated. The soundscape of the *Pasar 16 Ilir* in Palembang, which objectively registers at levels known

to pose risks of hearing damage, is subjectively experienced as a source of pleasure and social vitality. This cannot be explained by acoustics alone; it requires a turn to cultural geography and the theory of affective atmospheres. As described by thinkers like Ben Anderson, an atmosphere is not a subjective feeling but a shared, pre-personal, and spatially distributed affect. It is the "mood" of a place, which emerges from the complex interplay of bodies, materials, and sensory stimuli. The *ramai* of the Indonesian market is precisely such an effective atmosphere. It is produced by the dense orchestration of sounds—human voices, commercial activities, laughter, movement—and this acoustic density generates a collective feeling of energy, sociality, and economic life.[16] To a participant in this culture, the sound is not a collection of individual "noises" but a holistic, immersive, and positive affective field. To reduce this atmosphere to a single decibel reading is to fundamentally misunderstand its meaning and function.

This culturally specific valuation of sound has profound implications. It suggests that the globalized standards for noise pollution, such as those promoted by the World Health Organization, may be enacting a form of sensory imperialism, imposing a Western, often bourgeois, preference for quiet and order on cultures that may value sensory richness and social vibrancy. The desire for quiet, as expressed by residents in the gated communities of Jakarta, is itself a culturally specific and class-inflected desire. It is a desire for control, predictability, and the exclusion of the "other"—in this case, the sounds of the informal working class. Their framing of the vendor's call as "noise" is a political act of classification, an attempt to render a legitimate economic activity as a sensory transgression. This process, where sensory experiences are imbued with social and moral value, is central to the work of Pierre Bourdieu. The preference for quiet can be seen as a form of "cultural capital," a marker of distinction for the urban middle and upper classes. By defining their neighborhoods as "quiet zones," they are not just managing decibels; they are producing a space that acoustically signifies their social status. The vendor's horn or cry, therefore, becomes "noise" precisely because it disrupts this project of acoustic distinction. It is an audible reminder of the class realities and economic interdependencies that the gated community is designed to exclude. The politics of noise, then, is inseparable from the politics of class and the symbolic struggle over the sensory definition of the city.[17]

The constant negotiations, conflicts, and disputes over sound documented in this research—from mosque loudspeakers to street racing—are not signs of a dysfunctional urban environment. Rather, they are evidence of a vibrant, albeit contentious, public sphere. Drawing on the political theory of Chantal Mouffe, we can frame the urban soundscape as a space of "agonistic pluralism". Mouffe distinguishes between "antagonism" (a struggle between enemies that seeks to destroy the other) and "agonism" (a struggle between adversaries who respect each other's right to exist but disagree on how to order their shared reality). The acoustic conflicts in Jakarta and Palembang are fundamentally agonistic. There are struggles over the legitimate sensory ordering of shared space. Consider the mosque loudspeaker controversy. This is not a simple conflict between the religious and the secular. As our findings show, the conflict is often within the Muslim community itself, between the mosque management's desire to broadcast a wide range of religious content and the residents' desire for domestic peace. This is not an antagonistic desire to silence Islam; it is an agonistic debate over the proper form and extent of religious expression in the public soundscape. The resident who values the *adzan* but is annoyed by the long sermon is not an enemy of the mosque; they are an adversary in a debate about the acoustic social contract.[18] The lack of formal channels for this debate, due to its religious sensitivity, forces it into informal or passive-aggressive forms, but it remains a political negotiation. It is a struggle over the question: what are the acoustic rights and responsibilities of a religious institution in a pluralistic society?

Similarly, the conflict between street vendors and residents of exclusive communities is an agonistic struggle over the definition of public space. As Jacques Rancière argues, politics happens when a group that

has no part in the established order makes itself seen or heard, thereby disrupting the "distribution of the sensible". The vendor's cry is a political act in this Rancièrean sense. It is an assertion of presence by a group often rendered invisible in formal urban plans. It audibly challenges a sensory order that equates residential space with silence and commercial activity with designated zones. The vendor, by sounding their presence, is making a claim: "This street is also a workplace. I am a legitimate part of this city". The residents' complaint is a counter-claim: "This street is a private sanctuary. Your sound does not belong". This is not merely a nuisance complaint; it is a fundamental disagreement about the right to the city, played out in the acoustic register. Viewing these conflicts through the lens of agonism prevents us from seeking a simplistic "solution" that would inevitably mean silencing one party. An agonistic approach, instead, would focus on creating platforms where these competing acoustic claims can be voiced and negotiated. It recognizes that a truly democratic city will always be somewhat noisy, filled with the sounds of different groups asserting their presence and arguing over how to live together. The goal of a "just" soundscape policy, therefore, is not to achieve a universal, harmonious quiet, but to ensure that the processes of acoustic negotiation are fair and that the voices of the less powerful are not systematically silenced.[19]

Finally, it is crucial to move beyond a purely representational or semiotic understanding of sound and to acknowledge its profound materiality and its effects on the embodied subject. Sound is not just a sign to be interpreted; it is a physical force that acts upon the body. As phenomenologists like Maurice Merleau-Ponty have argued, we perceive the world through our entire embodied being, not just through a detached intellect. The urban soundscape is experienced as a set of vibrations, pressures, and rhythms that we feel as much as we hear. The continuous, low-frequency rumble of traffic that forms the keynote of Jakarta is not just an abstract symbol of modernity; it is a physical presence that permeates buildings and bodies. Residents spoke of windows rattling and a constant "hum" that they feel in their chests. This chronic exposure to acoustic vibration is a form of environmental stress that has measurable physiological consequences. The body in the city is a resonant body, constantly being shaped and affected by the acoustic forces around it. This perspective, drawing from new materialism, emphasizes the agency of non-human actors—in this case, sound waves and the technologies that produce them. The motorcycle engine is not just a tool; it is an actor that transforms urban space through its powerful acoustic output, creating zones of intensity and forcing bodies to adapt, flinch, or retreat. The embodied experience of sound is also central to its role in creating community. The shared experience of the *adzan* is powerful precisely because it is an encompassing, physical event. The sound washes over the entire neighborhood, synchronizing bodies in a shared moment of listening and orienting them toward a common spatial and spiritual center. It is a moment of collective attunement. Similarly, the rhythmic sounds of a wedding procession or a community work project are not just communicating information; they are creating a shared rhythm that binds participants together in a collective physical experience. This is the power of sound's materiality: its ability to bypass individual cognition and produce collective, embodied states of being. This focus on embodiment challenges urban planning to think about the sensory well-being of its citizens in a more holistic way. It is not enough to measure sound levels at a distance. We must consider how urban designs and materials shape the *feeling* of a place. Hard, reflective surfaces create harsh, cacophonous environments that batter the body, while softscapes like parks and vegetation absorb and soften sound, creating more gentle, restorative environments. An acoustically just city is one that attends to the embodied experience of its citizens, creating a variety of sonorous environments that can support different modes of being—from the vibrant, energetic intensity of the market to the calm, restorative peace of a park. It recognizes that the urban body needs both stimulation and respite, and that the material design of the soundscape is a critical tool for providing both.[18-20]

4. Conclusion

This research delved into the urban soundscapes of Jakarta and Palembang, Indonesia, and found them to be far more than a mere background of noise. They are dynamic, deeply meaningful, and intensely political arenas where the very character of the city is constantly being shaped and contested. By weaving together ethnographic narratives, objective acoustic data, and robust theoretical engagement, this study has shown that sound is a fundamental medium through which urban life is lived, collective memory is constructed, social hierarchies are maintained, and power is negotiated. The principal conclusions of this work are fourfold. First, the urban soundscape is a living archive, an "acoustic palimpsest" where historical layers of sound persist beneath the roar of modernity. Key soundmarks, from the sacred call to prayer to the secular calls of commerce, serve as vital anchors for cultural identity and collective memory, and their potential disappearance represents a significant form of intangible heritage loss. Second, the concept of "noise" is not a universal physical absolute but a profoundly relative and culturally constructed category. The disjuncture between high decibel levels and positive subjective experiences, as seen in the vibrant soundscapes of traditional markets, demands a radical rethinking of global noise-control paradigms and a greater appreciation for the cultural valuation of sound. Third, the urban soundscape is an "agonistic" public sphere, a space of productive conflict where competing claims to the city are audibly played out. These everyday acoustic struggles are not failures of urban management but are the very sound of a democratic city in the making. Finally, sound is a material force that shapes the embodied experience of urban life, acting on citizens' bodies in ways that can cause stress or foster community. Collectively, these conclusions argue for a significant paradigm shift in how we approach the acoustic environment in urban planning and policy. The dominant model of "noise control," with its narrow focus on decibel reduction, is inadequate for addressing the social, cultural, and political complexities of the urban soundscape. Instead, this study advocates for a holistic and culturally sensitive practice of "soundscape management" that listens to the meanings residents ascribe to sounds, acknowledges the political nature of acoustic space, and designs for the embodied sensory well-being of all citizens. For the rapidly transforming cities of Indonesia and the Global South, learning to listen to the intricate stories told by their soundscapes is not a luxury but a necessity for building more just, memorable, and livable urban futures.

5. References

1. Flügge E. Establishment listening, sonic idiosyncrasies, and Beethoven disrupted. Sound Stud. 2022; 8(1): 141–5.
2. Levy-Landesberg H. Sound and the city: rethinking spatial epistemologies with urban sound maps. Sound Stud. 2022; 8(1): 20–42.
3. Smith MD. Media, migration and technological possibilities: mapping sound in Cold War East Asia. Sound Stud. 2022; 8(2): 272–5.
4. Teboul EJ. Postscript on the societies of voltage control: composing the superstructure. Sound Stud. 2022; 8(2): 263–7.
5. Evans TB. Echoes in the capitol, echoes in history: architectural acoustics, media archaeology, and the infrapolitics of reverberation. Sound Stud. 2022; 8(2): 181–95.
6. Eberhart M. Musical sound in the intellectual history of early modern England. Sound Stud. 2022; 8(2): 257–60.
7. Brooks J. Composing the past: kitchen sound installation at Ham House. Sound Stud. 2023; 9(1): 144–8.
8. Bruyninckx J. Tuning the office sound masking and the architectonics of office work. Sound Stud. 2023; 9(1): 64–84.
9. Kalita D. Ethnographic insights into the choral landscape of India. Sound Stud. 2025; 11(2): 343–5.
10. Mikael S. Archival dissonance: silence, non-linguistic noise, and the unnoticed. Sound Stud. 2025; 11(2): 355–8.

11. Brunk KM, Goldberg JF, Maxwell C, Peery MZ, Jones GM, Gallagher LR, et al. Bioregional-scale acoustic monitoring can support fire-prone forest restoration planning. Front Ecol Environ. 2025; 23(7).
12. de Oliveira-Santos JR, Oitaven LPC, de Freitas MA, de Moura GJB, de Carvalho Kokubum MN, Gambale PG. Acoustic and visual behavior in Boana albomarginata and Dendropsophus minutus (Anura: Hylidae) in response to conspecific playback in northeast Brazil. Evol Ecol. 2025.
13. Kreuter N, Fernández-Gracia J, Eguíluz VM, Sequeira AMM. Inferring leader-follower dynamics in three shark species using acoustic telemetry data. Mov Ecol. 2025; 13(1): 60.
14. Sebastián-González E, M Barbosa J, Montoya-Bernabeu P, Hart PJ. Acoustic traits of three Hawaiian honeycreepers in a fragmented landscape. Ecol Evol. 2025; 15(8): e71919.
15. Li B, Hu F, Li W, Su W, Zhu J, Jiang W. Spawning habitat selection in Schizothorax wangchiachii using acoustic tagging and tracking. Front Ecol Evol. 2025; 13(1615081).
16. Roemer C, Haquart A, López-Baucells A, Besnard A. Current frontiers in the passive acoustic monitoring of bats. Methods Ecol Evol. 2025; (2041-210X.70157).
17. Collie FN, Ward JM, Howie D, Bertoia A, Monks JM. Acoustic monitoring reveals widespread distribution of pekapeka across an isolated forest ecosanctuary, Sanctuary Mountain Maungatautari. N Z J Ecol. 2025.
18. Scheidel A. Political Acoustic Ecology: On the role of Political Ecology in soundscape studies. AER. 2023; 1(1).
19. Theberge J, Dorsey B. Emerging directions in acoustic ecology – trends within Canada's national protected areas system. AER. 2023; 1(1).
20. Beever J. Thinking like a giraffe: Biosemiotics, ethics, and soundscape ecology. AER. 2023; 1(1).