

“Town Built From Fleeting Matter”: Audiowalking San’ya’s Hidden Histories as Practice-Led Spatial Inquiry

Lisa Woite 

Department of Imaging Arts and Sciences, Musashino Art University, Japan

Correspondence: Lisa Woite (lisa.k.woite@gmail.com)

Submitted: 16 February 2026 **Accepted:** 5 June 2026 **Published:** 27 August 2026

Issue: This article is part of the issue “The Urban Canvas: Spatial Computing in Planning, Analysing, and Representing the Cityscape” edited by Valerio Signorelli (University College London), Andy Hudson-Smith (University College London), and in memory of Heejung Kwon (Yonsei University), fully open access at <https://doi.org/10.17645/up.i484>

Abstract

This article revisits the audiowalk *placeless: San’ya*, originally produced in 2021 and re-staged in 2025 with geolocated audio technology. Using a practice-led approach and drawing on qualitative interviews and observational field notes, the study examines audio-based walking practices as a form of spatial computing in which digital sound is embedded in physical space and activated through movement. The case is situated in San’ya—a district name that officially no longer exists but remains associated with marginalization—within Tokyo’s continually changing urban fabric, where the past is often only weakly articulated in the built environment. The audiowalk traces layered histories, from the site’s adjacency to the Kozukappara execution grounds in the Edo period, through its history as a settlement for the stigmatized Burakumin caste, and its present-day role as home to an ageing population of day laborers. By keeping the narrative content constant while altering its technical mediation, the re-staging isolates how geolocation and contingency shape participant experience. The study contributes to spatial computing discourse by demonstrating that geolocated audio can function as a spatial interface that reconfigures movement and attention without displacing embodied awareness from the environment. It suggests that such practices can foster engagement with non-monumental urban histories without stabilizing absence into fixed narratives, while also foregrounding ethical questions about mediated presence in socially uneven spaces.

Keywords

audiowalk; embodied experience; geolocated audio; locative media; non-monumental memory; practice-led research; San’ya (Tokyo); spatial computing; urban marginality

1. Introduction

Recent scholarship on mobile and location-aware technologies has increasingly emphasized how digital systems shape the experience of urban environments through embodied and situated interaction. In these contexts, spatial computing is approached as an experiential arrangement in which physical space, digital content, and bodily presence are continuously negotiated, with space understood as dynamic and relational rather than as a stable and abstract container for information (de Souza e Silva & Sheller, 2014; Dourish, 2001; Farman, 2012). In this sense, computation is encountered as embedded in streets, buildings, devices, and everyday routines and is integral to how urban life unfolds (Kitchin & Dodge, 2011).

This study contributes to spatial computing discourse from a practice-led perspective by examining geolocated audio as a mode of spatial mediation that has received comparatively little attention within the field. In urban planning and design contexts, spatial computing has been predominantly explored through data-driven modeling and simulation approaches, such as digital twin frameworks and interactive urban models, which are oriented toward authoritative and stable representations of urban space. While augmented and mixed reality technologies have extended this into immersive visual experiences, the auditory dimension remains largely unexplored, yet offers a distinct set of experiential qualities that expand what spatial computing can mean in practice. Unlike visual overlays, which redirect attention toward a screen or display, audio operates as an additive layer (Ihde, 2007). Environmental sounds and bodily sensations remain perceptible alongside the mediated content and keep the listener grounded in physical space even as a narrative layer is introduced.

The case study at the center of this article is *placeless: San'ya*, an authored audiowalk in which essayistic spoken-word texts, written as letters addressed intimately to the listener, accompany walking through specific sites in the district. The narration engages with the site's histories and atmospheres through affective and associative framing without imposing a definitive interpretation or a set route. The work was originally presented in 2021 and re-staged in 2025 using geolocated audio technology. The re-staging provided an opportunity to examine how the same narrative material unfolds under altered technical conditions and within a changing urban environment. Within this framework, the audiowalk functions as both an artistic work and as a research instrument. Drawing on participant interviews and observations, the article examines how listeners experience the audiowalk under the contingent conditions of a specific urban environment. The work is not evaluated in terms of usability or effectiveness; instead, participant accounts are treated as situated reflections on how geolocated sound, movement, and urban space interact in practice. This study is thus situated at the intersection of locative media, sound studies, and spatial computing, providing a perspective that is grounded in artistic practice and participant experience.

San'ya, a neighborhood located in northeastern Tokyo, presents a particularly instructive site for this investigation. Its urban fabric is shaped by transient populations, inexpensive lodging, aging infrastructure, and the proximity of sites associated with labor, passage, and death. Many of these histories are only weakly marked in the built environment, or have been deliberately obscured through redevelopment and administrative restructuring. In this context, audio-based walking practices offer a way of engagement without resolving absence or instability into fixed narratives.

This study thus offers three main contributions. First, it expands understandings of spatial computing by demonstrating how audio operates as an additive spatial interface that layers digital content onto physical experience without displacing embodied attention from the environment. Second, it demonstrates that contingency and misalignment can function as productive features of geolocated audio works, as they generate interpretive engagement with urban histories that resist authoritative representation. Third, it reflects on the ethical and experiential complexities that arise when walking through socially uneven spaces with narrative mediation.

The article is developed across the following sections: Section 2 outlines the conceptual framework, drawing on theories of sound, walking, and situated knowledge. Section 3 contextualizes San'ya within Tokyo's layered urban history. Sections 4 and 5 introduce the audiowalk and its re-staging. Sections 6 and 7 detail the methodology and participant experiences. Section 8 discusses the implications of these findings for spatial computing and urban research, followed by a conclusion that reflects on the broader relevance of audio-based, practice-led approaches to spatial computing discourse.

2. Walking, Listening, and Spatial Mediation

Engagement with sound in this study is approached as a mode of situated and embodied knowledge production. Central to this orientation is sound's temporal and bodily character: It unfolds in time and remains inseparable from the listener's presence in space, resisting the tendency of visual representations to stabilize space into legible and seemingly complete forms (Ihde, 2007; Voegelin, 2010). Listening occurs in relation to movement, proximity, distraction, and interruption, and is shaped as much by what is partially heard or missed as by what is clearly perceived (LaBelle, 2019). These qualities make sound-based practices particularly suited to engaging with fragmented or contested urban histories (Bradley, 2016; Huyssen, 2003). Crucially, the perceptual structure of sound differs from that of visual media. Auditory perception is omnidirectional and ambient, surrounding rather than focusing attention, and cannot be selectively closed off the way vision can (Ihde, 2007). An audio layer, therefore, does not displace attention from the environment and allows environmental sounds, bodily sensations, and spatial awareness to remain present alongside mediated content.

Because listening is inseparable from bodily orientation and movement through space, sound-based practices often intersect with walking as a mode of spatial engagement (Biserna, 2022). In this article, walking is understood as a situated method that produces partial and relational forms of knowledge, since factors such as bodily capacity, social norms, environmental conditions, and infrastructural constraints all influence the walker's habits and experience (de Certeau, 1984; Haraway, 1988). In artistic contexts, walking has long been explored as a practice that simultaneously reads and writes space, particularly in peripheral or marginal urban environments (Biserna, 2024; Careri, 2002).

These considerations are particularly relevant in audio-based walking practices, where movement is paired with mediated listening. Given their position between sound art, mobility, and locative media, the terminology for such works remains imprecise (Bradley, 2016). While listening walks and soundwalks are commonly associated with acoustic ecology and the World Soundscape Project and emphasize attentive listening to the existing sonic environment (Schafer, 1977; Westerkamp, 1974), in this article the term audiowalk will be used to describe authored, pre-recorded works that accompany walking through a specific

site and operate “at the interface of fixed media and the unstable environment of the street” (Biserna, 2022, p. 7). The work examined here draws on this tradition, particularly the authored, site-specific audiowalks of Janet Cardiff and George Bures Miller (Cardiff, 2005). Other notable works include Graeme Miller’s *Linked* (2003). Miller used radio transmitters to broadcast oral history recordings from former residents along the route of a demolished East London community (Butler & Miller, 2005). While most audiowalks are aimed at single participants, Rimini Protokoll’s *Remote X* (2013–), staged in cities worldwide, guides large groups of participants through urban spaces via headphone audio and produces experiences that are at once collective and individual (Rimini Protokoll, n.d.). These works share an orientation toward sound as a means of surfacing what visual or monumental forms of urban representation tend to leave out; a concern that directly informs the approach taken in this study.

Developments in locative media and mobile technologies have introduced new conditions for audiowalk practices by enabling sound to be triggered in relation to geographic position (de Souza e Silva & Sheller, 2014; Farman, 2012; Gordon & de Souza e Silva, 2011). In this broader sense, audiowalks can be understood as a minimal form of spatial computing, in which geolocated content is embedded in physical space and activated through bodily movement, producing situated experience through sound rather than visual overlay. This aligns with understandings of spatial computing as fundamentally concerned with embodied, contingent interaction between digital systems and physical environments (Dourish, 2001; Kitchin & Dodge, 2011), even as those frameworks do not explicitly address audio-based forms. Embedded in the dynamics of the urban environment, audiowalks unfold differently depending on movement, pacing, attention, and situational conditions, and thus reinforce the inherently situated and subjective nature of both walking and listening (Ihde, 2007; LaBelle, 2019).

Since the site for this research is San’ya, a neighborhood whose histories of social marginalization are neither fully erased nor clearly articulated through monuments or official narratives, this article also engages with non-monumental approaches to a contested urban memory. Where histories persist primarily through informal traces and practices, methods that can accommodate incompleteness without resolving it into authoritative explanation become especially relevant (Biserna, 2022; Huyssen, 2003).

3. San’ya as a Situated Case

San’ya is located in northeastern Tokyo, centered around Minami-Senju Station and the Namidabashi intersection (Figure 1). A defining characteristic of the area is that, in an administrative sense, it no longer exists as a named district. Revisions to the residential address system in 1966 divided San’ya between Taito and Arakawa wards and removed the name from official maps (Fukushi Zaidan, n.d.). This restructuring was part of a broader effort to dissociate the area from long-standing associations with homelessness, poverty, violence, and the concentration of transient day laborers (Gill, 1994, p. 276). Responsibility for employment and welfare provision was consequently fragmented across multiple jurisdictions, which often resulted in bureaucratic ambiguity and limited accountability (Gill, 1994). Despite this official erasure, the name San’ya persists in everyday usage and local identity and appears in the names of labor unions, social initiatives, and businesses, as well as in shrine inscriptions and informal speech (McCurry, 2019). This coexistence of administrative non-recognition and lived continuity produces a form of spatial ambiguity that is central to the audiowalk discussed in this article.

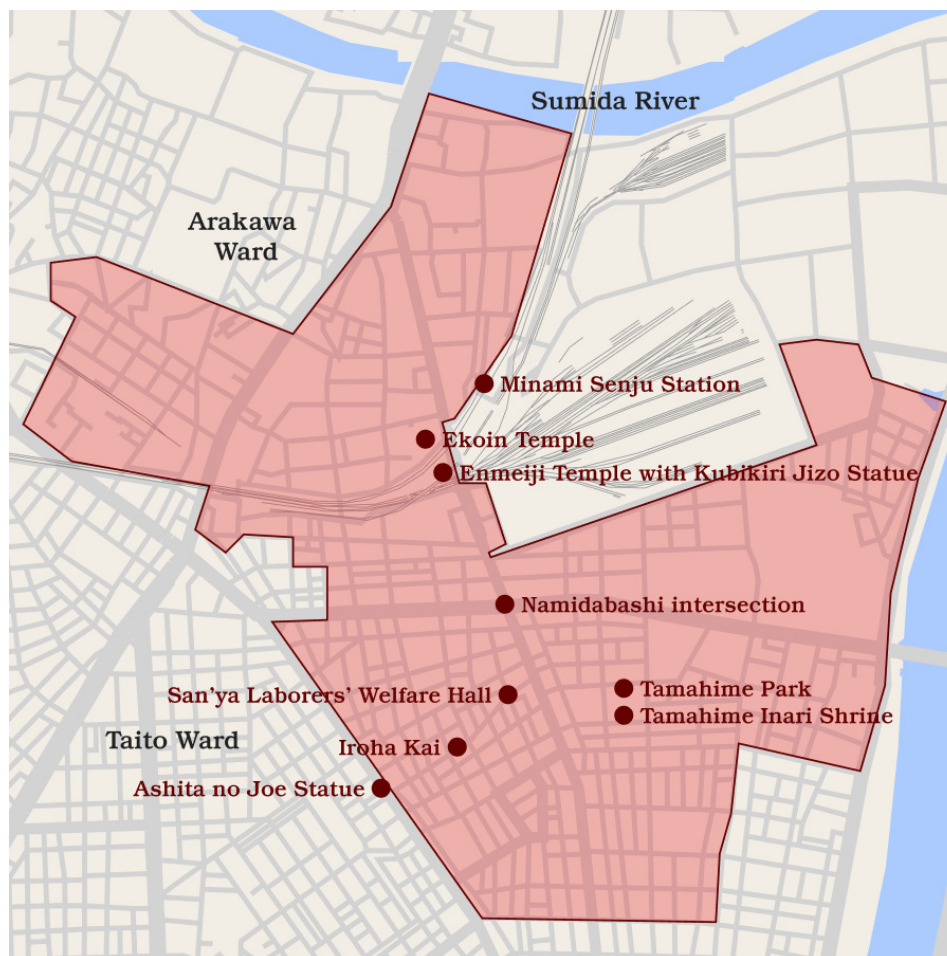


Figure 1. Map of San'ya with key locations for this study.

San'ya's marginality is rooted in long and layered histories of spatial and social exclusion. During the Edo period, the area formed part of the city's northeastern fringe, adjacent to major highways, and was associated with transient populations and temporary lodging (McCurry, 2019). This peripheral positioning was closely tied to systems of exclusion that structured Edo society. Kozukappara, one of the city's principal execution grounds, was established at San'ya's northern edge in 1651, with tasks related to execution assigned to Burakumin outcaste communities settled nearby. Together with the neighboring pleasure quarters of Yoshiwara, the area formed a constellation of sites dedicated to activities that were deemed necessary but morally troubling, which reinforced its association with social stigma (DeVos & Wagatsuma, 1967).

Following the Meiji period and accelerating after World War II, San'ya developed into Tokyo's largest *yoseba*, functioning as a recruitment hub for day laborers employed in construction, infrastructure, and postwar reconstruction. Low-cost lodging houses (*doya*) supported this system by accommodating transient workers under conditions of long-term precarity. As demand for day labor declined toward the end of the twentieth century, many workers aged in place, transforming parts of the district into zones of concentrated elderly poverty and converting former *doya* into de facto retirement homes (Fowler, 1996; Takada, 2018). While the social vulnerability of the area persisted, its history became increasingly obscured through administrative division and urban modernization.

Even though Kozukappara was a key site within Edo's urban and symbolic order, its history was never consolidated as a singular historical site. Instead, the former execution grounds were gradually fragmented and rendered largely invisible by railway infrastructure and adjacent developments. The Kubikiri Jizo (beheading Jizo) statue, which was part of the original site and now sits at Enmeiji Temple, remains one of the few material markers referencing this history (Takeuchi, 2020). It reflects how San'ya's violent or uncomfortable pasts are mostly folded into everyday urban life without being formally resolved.

In recent decades, the district has undergone further transformation through the growth of low-cost tourism, with former doya repurposed as budget hostels. This shift has produced a heterogeneous social landscape in which elderly former laborers, unhoused residents, long-term locals, and international visitors coexist (Kahan, 2025). While San'ya has long attracted photographers seeking alternative urban imagery, the post-pandemic tourism boom has further intensified decontextualized representations on social media. Images of derelict or overgrown buildings have come to circulate as aesthetic curiosities, often read or framed in ways that detach them from their function as residential infrastructure for vulnerable populations. Such framings risk transforming spaces of ongoing social precarity into consumable backdrops and raise ethical questions about exposure, spectatorship, and responsibility.

These conditions make San'ya difficult to read through conventional forms of urban representation. Its histories are neither fully erased nor clearly articulated through landmarks or official heritage narratives, but persist through absences, informal practices, and partial markers. This ambiguity renders the district particularly suited to audio-based, walking-centered engagement.

4. The Audiowalk in Its Original Context (2021)

The audiowalk *placeless: San'ya* was created in 2021 for the inaugural Sairai San'ya Art Festival, an annual local event organized by the collective 3ducksDADA (SAIRAI Art Fest, n.d.). The festival aims to engage with San'ya as a heterogeneous and marginal urban zone by inviting artists to produce site-specific works that are presented in public spaces and local businesses.

During Sairai San'ya 2021, the audiowalk was accessed via QR codes printed on a festival map distributed at the reception. Each audio segment was associated with a specific site, but playback was not technically bound to geographic position. Scanning a QR code linked listeners to a SoundCloud page hosting the recordings (<https://on.soundcloud.com/TCyTPb5RhZ4KD3Wk3B>), which allowed the audio to be accessed freely and without enforced spatial boundaries. This low-threshold setup was chosen to ensure accessibility across devices and levels of technical familiarity, and to avoid the need for a dedicated application. While most visitors attempted to listen to the recordings close to their assigned locations, the format also allowed listening elsewhere, including outside the district.

Placeless: San'ya forms part of an ongoing artistic series that explores liminal spaces within Tokyo. As in other iterations of the project, the audio takes the form of essayistic spoken-word texts written as letters addressed directly to the listener as "my dear," to establish an intimate mode of address. Rather than providing historical explanation or guidance, the narration engages with the place in an affective and associative manner. Across four audio segments, themes of passage, boundary-crossing, impermanence, and erasure recur, drawing on layered references without prescribing a linear sequence or a fixed route. To reinforce the work's open and

non-directive structure, listeners were neither required to follow a specific order nor to complete all segments (Figure 2). The placement and content of the segments are introduced in the following section.

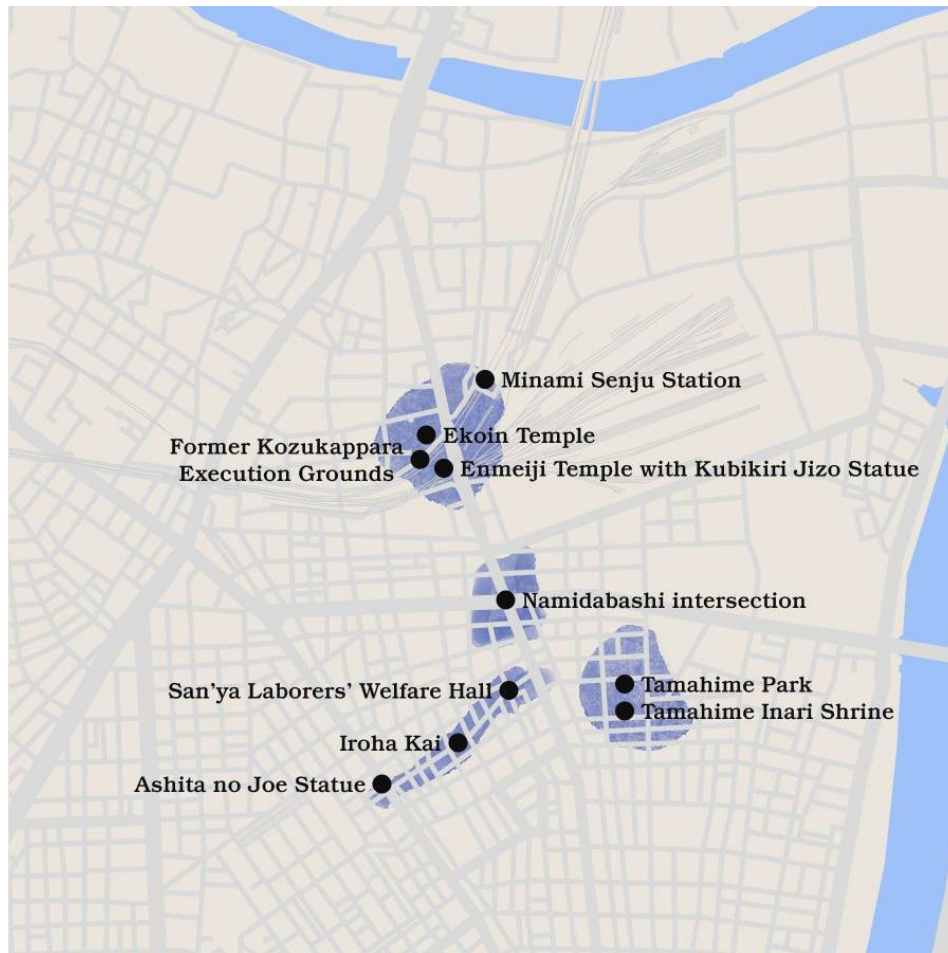


Figure 2. Locations of the four audiowalk segments within San'ya.

4.1. The Audiowalk Segments

The segment situated near Minami-Senju Station addresses the former Kozukappara execution grounds and introduces the site as a non-monumental zone of liminality. The narration opens with the speaker's bodily fatigue and disorientation upon arrival, thus using sensory experience as an entry point into the area. While avoiding linear or didactic historical narration, the segment evokes the scale and aftermath of violence through tone and imagery. Attention is then directed to the present landscape where cemeteries, railway infrastructure, and quotidian activities intersect (Figure 3).

At Namidabashi intersection, the audiowalk frames the site as a layered threshold. Setting a contrast to the unremarkable appearance of the crossing, the narration recalls its historical significance as the "bridge of tears" that marked the final passage for those led towards execution at Kozukappara (Nikkei, 2016). Through simple bodily prompts aligned with traffic signals and ambient sound, listeners are invited to become aware of the intersection as a space where temporal, spatial, and symbolic boundaries overlap, while remaining conscious of their present-day freedom of movement (Figure 4).



Figure 3. Part of the former Kozukappara execution grounds: Enmeiji Temple with Kubikiri Jizo statue.



Figure 4. Namidabashi intersection.

The remaining segments extend these concerns and themes through other sites in the district. At Iroha Kai shopping street (Figure 5), the narration emphasizes absence and disappearance, and juxtaposes San'ya's role in supporting Tokyo's postwar urban expansion through day labor with the lack of monumental recognition for this history. At Tamahime Inari Shrine (Figure 6), attention shifts to the symbolic and administrative erasure of the name San'ya itself. Naming practices, ritual gestures, and contemporary use of the surrounding space are linked to longer histories of impermanence and marginalization.



Figure 5. Iroha Kai shopping street.



Figure 6. The main entrance at Tamahime Inari Shrine.

The following extract from the Iroha Kai segment gives a sense of the audiowalk's voice and approach:

Some quick notes on things that are absent, my dear. San'ya, town built from fleeting matter, everything here is non-permanent save for the lasting reputation. Homes of transit, lodging houses and cheap hostels, people born in other places. Elsewhere in Tokyo: the expressway, monorail, sports

stadiums, and the sewage system underneath us; all those cold, inhuman structures that were once built by warm, calloused hands. It was at San'ya's *yoseba*, where those hands shook the ones of labor brokers in agreement to build the metropolis' recent monuments. A Sisyphean rhythm. Morning labor market, crack of dawn, liminal time, liminal way of life, hand to mouth, attack to attack. I am approaching the entrance of what was once Iroha Kai shopping street. To my right, for decades, the Nodaya liquor store, now a new nondescript apartment building. "Avenir ici" [アヴニールイシ]—the future is here....They say that Iroha Kai was a twilight space long before its demolition in 2019. The bubble burst and, as the stream of jobs for strong men dried up, so did the life inside the arcade. San'ya, the muscle of the modern metropolis. Now old men's town, formed by absence and fading. Of course, the center of San'ya is a passage that is no longer there.

While the narrative content of *placeless: San'ya* remained unchanged, its re-staging in 2025 introduced new technical and methodological conditions. The following section details these changes and examines how altered modes of access and spatial constraint shaped its use as a research instrument.

5. Re-Staging the Audiowalk (2025)

The decision to restage *placeless: San'ya* in 2025 was motivated by both artistic continuity and a renewed research interest. Returning to the area several years later revealed further social and infrastructural shifts and raised questions about how site-specific works age under changing urban conditions. Tokyo's rapidly transforming cityscape provides a particularly compelling context for such questions, as site-specific interventions are more likely to encounter altered conditions within relatively short timeframes (Huyssen, 2003; Jinnai, 1995). The re-staging, therefore, functioned as an opportunity to examine how an audiowalk engages with the city as a palimpsest that is continually reworked through demolition and redevelopment.

Instead of QR codes, the 2025 re-staging employed the Echoes platform (<https://explore.echoes.xyz/collections/uYBmB1WcrDQBorGE>), which enables geolocated audio playback. In this configuration, each audio segment is embedded within a defined geographic zone on a digital map, and playback is only triggered when the listener physically enters the area and stops when they step out of the zone (Echoes.xyz, n.d.). The work thus shifts from functioning as a portable soundtrack to operating as a spatially contingent experience that is dependent on the listener's movement and decisions.

The re-staging further marked a shift in the author's position from an exhibiting artist to a researcher working with the audiowalk as a practice-led inquiry. In this sense, the re-staging does not aim to produce a definitive or improved version of the work, but rather to test how the same narrative material unfolds differently when re-embedded in a changing city and under altered technical conditions. By keeping the narrative content constant while altering its spatial logic, the 2025 iteration isolates the role of geolocation as a structuring force. These considerations informed the design of the participant study discussed in the following sections.

6. Research Design and Methodology

This study adopts a practice-led research approach in which the re-staging of an existing artistic work functions as both method and site of inquiry. Rather than treating the audiowalk as a neutral instrument for data collection, the work itself is understood as an experimental situation through which questions of spatial

perception and embodied knowledge can be explored (Candy & Edmonds, 2018). This made it possible to observe how navigation, pacing, attention, and orientation were affected by the interaction between narration, bodily movement, and urban context (Biserna, 2022; Careri, 2002).

The participant study consisted of individual audiowalks followed by semi-structured interviews with nine participants. Each participant experienced the audiowalk alone, using their own smartphones and headphones. To approximate the conditions of the original festival presentation, a brief verbal introduction and minimal contextual information were provided before the walk began. Participants were informed that there was no set order, route, or requirement to complete all audio segments. This openness was intended to preserve the exploratory character of the work, allowing for autonomous navigational and interpretive decisions. Participants furthermore recorded their movement trajectories with a GPS tracking application, which was later visualized (Figure 7). All walks took place between noon and sunset, with variations in weather and pedestrian activity depending on the day of the week. These variations were not controlled for but treated as integral to the study, as they reflect the contingent experience of an urban environment.

The interviews focused on the participants' embodied experience. Questions addressed how the geolocated audio influenced movement and attention, how moments of alignment or misalignment were perceived, and how narrated histories related to immediate surroundings (Pink, 2015). Interviews were audio-recorded, transcribed, and anonymized, with participants identified by numerical codes (P1–P9). Although individual differences are acknowledged, the analysis focuses on recurring patterns and shared tensions across accounts. An overview table presents anonymized background information about gender, age range, and relationship to Japan, to contextualize positional differences (Table 1).

Table 1. Overview of participant characteristics.

Participant	Gender	Age	Relationship to Japan
P1	female	20s	local
P2	female	30s	long-term resident
P3	male	20s	local
P4	male	40s	long-term resident
P5	female	30s	long-term resident
P6	male	30s	long-term resident
P7	female	20s	local
P8	male	20s	local
P9	male	30s	long-term resident

The analysis follows a qualitative, interpretive approach based on a close reading of interview transcripts and field notes. Themes were developed iteratively and read in relation to the conceptual framework outlined earlier in the article. The study does not aim to evaluate usability or generalize findings beyond this context. Reflexivity is acknowledged as integral to the practice-led setup, with the researcher's dual role treated as part of the methodological condition (Berger, 2013; Enosh & Ben-Ari, 2015).

7. Findings: Participant Experiences

7.1. *Entering the Walk: Expectations and Orientation*

This section presents participants' initial encounters with the audiowalk and the ways they oriented themselves to both the medium and the site. The walk gave rise to individual paths and affective readings of San'ya. Participants described their early experience as unfolding through an interplay between narration, environmental conditions such as light and weather, the affordances and frictions of the app, and their own habits and positionalities as walkers.

None of the participants had prior experience with audiowalks, and all reported little to no knowledge of San'ya. Several explicitly noted that they began the walk with "no particular expectations" beyond a general curiosity about the format. As a result, the first minutes were largely spent becoming acquainted with the medium itself: understanding how the audio was triggered, how closely one needed to attend to the map, and how freely one could move without interrupting playback. Early orientation took different forms, ranging from exploratory wandering guided "by instinct" or habit to more cautious navigation focused on avoiding missed content. In all cases, participants described these moments less as confusion than as a period of adjustment.

In reflecting on these early stages, participants often framed the audiowalk in relation to more familiar guided urban formats, such as transport-based sightseeing tours with fixed timing and trajectories. In contrast, the audiowalk was described as allowing for deviation and self-directed movement. Simultaneously, the distinct audio zones created a loose structure that made the walk feel intentional without being prescriptive. One participant characterized this balance as providing "freedom, but not randomness."

Curiosity about the medium also shaped expectations. For some participants, encountering the Echoes platform prompted interest in audiowalks as a broader way of engaging with the city, particularly as a means of accessing local narratives. Others initially approached the experience with a focus on how to "do it right," with considerations for where to start, whether there was an optimal order, and how to maintain continuity between segments. Even though participants were informed that there was no fixed starting point or required sequence, the spatial distribution of the audio and a desire to encounter what was perceived as the walk's "foundational" historical layer often generated emergent sequencing. In practice, this frequently meant beginning at Kozukappara, moving on to Namidabashi, and continuing toward either Iroha Kai or Tamahime Inari Shrine.

Across accounts, these first moments reveal that orientation was both spatial and conceptual. Participants negotiated how the audiowalk should be understood, while simultaneously learning how their own movement, attention, and decision-making would shape what unfolded. The audiowalk thus began as a process of calibration, through which expectations, interest, habits, and technical conditions gradually aligned to produce an individualized entry into the district.

7.2. *Emergent Navigation*

Across participants, the audiowalk produced movement patterns that differed noticeably from their everyday walking habits in an urban environment. Instead of moving efficiently from one point to another, they slowed down, paused, circled back, or paced in place to remain within audio zones, complete recordings, or locate

elements referenced in the narration. The walk thus functioned as a set of loosely connected spatial prompts that reorganized how participants moved through the neighborhood.

Several participants became aware that their habitual walking pace did not align with the temporal structure of the recordings. One participant noted that moving too quickly through a zone with a longer audio segment required turning back to hear the recording to the end, while another described how their initially “goal-oriented” pace shifted as they adjusted to the rhythm imposed by the audio:

At first, when I started it, I was walking very fast...and then maybe by the third recording, I started slowing down...you realize that you don't have a specific place to be and you have to pace yourself to hear the recording to the end.

Differences between the duration of recordings and the spatial size of their zones generated distinctive forms of movement. When audio segments were short relative to their zones, participants reported having time to explore after playback had ended. When recordings were long in relation to their zones, participants moved particularly slowly or walked repeated loops within the area. One participant simply paused at the edge of the Namidabashi zone and observed their surroundings until the recording finished.

Several accounts suggest that participants actively integrated these altered movement patterns into the narrative they constructed. One participant realized they had missed the Kozukappara segment after arriving at Namidabashi. Because the narration framed the crossing as a border between the living and the dead, they decided they “wanted to hear the history of the dead first” and chose to retrace their steps to encounter what they perceived as the walk's foundational historical layer. Together with other factors discussed later in this section, these decisions produced highly individualized routes within the shared goal of completing all four segments. The recorded sequence and timing data illustrate this further. Walking times ranged from 46 to 91 minutes, and the GPS traces (Figure 7) show that no two paths were identical. Even where participants followed the same sequence, individual route choices, detours, and returns produced distinct spatial experiences within a shared framework.

7.3. Spatial Boundaries and Technical Constraints

Across accounts, spatial constraint by the geolocated audio emerged as a defining feature of the audiowalk experience. Access to the recordings depended on remaining within predefined geographic zones, and participants frequently described the walk as open in principle but restricted in practice. One participant summarized this tension succinctly: “I felt restricted...because of the zones and the audio...you have to pay attention to not get out of the zone to keep the audio going...restricted is the right word, but not directed.”

This sense of restriction did not stem from the narration itself, which was frequently described as more poetic than commanding, but from the app's spatial logic. A recurring experience was the audio stopping unexpectedly when stepping out of a zone, which sometimes produced frustration. Participants described moments of absorption in the story, followed by sudden silence. Since the recording would always resume from the beginning instead of the point of interruption, these occurrences shifted attention away from the environment and back toward the phone and map. This increased awareness of the technical system often conflicted with an expressed desire to involve the visual interface as little as possible.

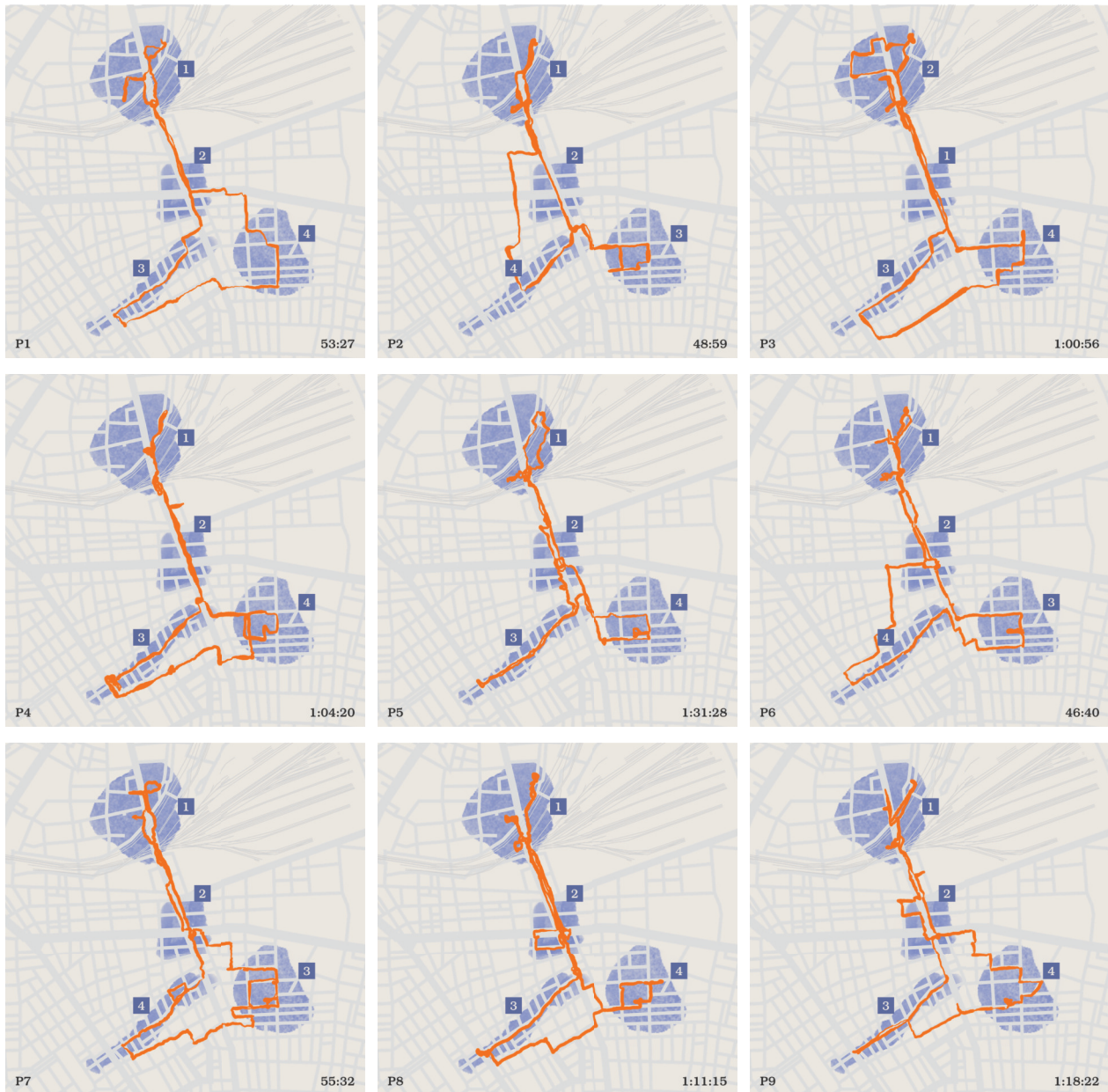


Figure 7. Participant paths.

At the same time, these limitations were also experienced positively, as participants became aware of how their own movement activated or deactivated the narrative. Several accounts emphasized that the bounded zones encouraged attentiveness to spatial boundaries and navigation choices. One participant described this as surprisingly pleasurable, connecting it to a broader reflection on digital media habits:

It felt more, like, exciting that way, actually....Because if it had just kept playing, then I would have just walked anywhere. But then this forced me to kind of stay on a track, and I guess to look at certain things in tandem with the narrations. I felt less random, I suppose...because we're always on social media or whatever, YouTube and stuff, and you can play everything two times speed and skip forward and skip back....I liked how this was out of my hands, so I didn't have the urge to even look at my phone and try and scroll or play back.

7.4. Narrative Alignment and Misalignment

Participants repeatedly noted that the strongest and most memorable moments occurred when the narration aligned closely with what they were seeing. When spoken descriptions corresponded with visible features in the environment, they felt a sense of synchronization and were more anchored in the narrative.

One participant described such a moment of alignment:

But in the last area...the recording matched the location where I was...the blue tile building on the right and the concrete building on the left. And it was super cool because you really pay attention to what the recording is saying, and it's easier to imagine the details and the place.

Conversely, when the narration referenced a feature that the participant could not locate, or when they entered a zone from an unexpected direction, the experience could feel disjointed and confusing. The same participant expressed disappointment when the narration referenced a sign bearing the kanji for San'ya that they were unable to find.

Others experienced such misalignments more positively. One participant characterized the process as involving "a lot of back and forth," likening it to a treasure hunt and an ongoing process of assembling fragments. Another participant extended this perspective further, explicitly valuing moments of drift, lag, and mismatch: "It didn't feel like a tour where everything is supposed to line up perfectly. It felt more...alive. Like things were happening at the same time, but not necessarily matching."

7.5. Atmosphere and Narrative Framing

Emotional responses to the area varied significantly, even with comparable environmental conditions. While some felt a sense of peaceful everyday life, routines, and neighborhood intimacy, or more neutral quotidian impressions, others experienced the area as unsettling and tense. Importantly, several accounts suggested that the audiowalk did not simply add information but actively framed how the environment was interpreted. The segment on the Kozukappara execution grounds, located closest to the meeting spot, frequently became the opening segment and was particularly influential. Hearing about the scale of executions immediately shaped one participant's experience of the walk: "That spooked the hell out of me....I started looking behind my shoulder...trying to see if anyone's following me." Here, the story created an affective lens through which ordinary street encounters became charged with suspicion and unease.

For others, the walk produced a more reflective or even poetic attentiveness. Several participants described the walk as making them aware of San'ya's juxtapositions, such as old and new buildings, graveyards next to railways, and "forgotten" structures alongside everyday life. One participant described Minami-Senju as a place where boundaries "like living and dead, past and present, sin and non-sin" collapse and noted that this perception emerged specifically through the framing of the audio.

7.6. Sensory Contingencies

Variations in sensory conditions played an important role in how the audiowalk unfolded. While each participant completed the walk only once, some noted that changes in weather, time of day, or seasonal

conditions would likely create a vastly different experience. Sunlight, in particular, was frequently mentioned as affecting both perception and navigation. One participant described the late afternoon light that filtered through the low-rise buildings as creating a “mystic” atmosphere, while another assigned it a “peaceful” quality. This visual atmosphere stood in tension with the narration’s darker themes. For another participant, glare made it difficult to see and prompted them to change streets, demonstrating how the route of the walk could be altered by environmental conditions.

Beyond light, participants also mentioned smell and other sensory impressions. Passing “dumpster-like” smells, for instance, triggered associations with other places and memories and produced an unexpected emotional resonance.

One participant recalled a sonic overlap while walking through Iroha Kai shopping street, when a single shop was playing a Billie Eilish song. Listening with one earphone in, the song faded in and out as they moved past, and collided with the audiowalk’s narration and the surrounding scene of aging buildings and passersby. The moment was described as “a super strange collage” and raised a lingering sense of temporal dislocation:

To hear that kind of, like, approach and then pass me by while [the audio is] talking about the history of that street....Like, where am I? What time period is this? There’s only old people on that street, and everything is kind of falling apart, and it’s just Billie Eilish’s beautiful voice. It was the *Birds of a Feather* song. It’s kind of haunting, right? But also super contemporary.

7.7. Social Positioning and Ethical Tensions

All participants described a heightened awareness of their social position while walking through a non-touristic residential area, emphasizing moments of self-consciousness and the feeling of being watched and visually marked in space. One participant linked this directly to her visible difference as a young foreign woman, describing how the atmosphere of the narration intensified her sense of exposure and inhibited her from lingering despite curiosity. A similar sense of outsiderhood was expressed by a male local participant, who nonetheless described feeling that he “didn’t belong here” when moving through the neighborhood.

Several participants used the word “witness” to describe their role during the walk. One elaborated on this in terms of attention and partial knowledge: “I felt like a witness, I felt like a sort of a social scientist....I was looking to see something, and I was also looking for something.” Another described witnessing as distinct from mere observation and connected it to the temporal layering of the audiowalk:

Observing is just seeing what’s going on at the present moment...but because there’s that history to it, it feels more like you’re witnessing the whole history....Imagining, flashback. I think that’s why I resonate closely with the word “witness.”

At the same time, this mode of attentive presence raised ethical questions among participants. One described a feeling of “invading the space” and of mentally consuming people as part of the walk’s narrative, noting the unease of “looking with intention” and imagining others through a historical frame they had not consented to:

Being there, like, consuming as content...felt sometimes a bit wrong...these people that are there, you kind of piece them together with the past. So in a way they become a part of the experience, part of the audio...they become the content of the walk...when they don't expect to be consumed in that way.

8. Discussion

The following reflects on what the re-staging of *placeless: San'ya* reveals about geolocated audio as a form of spatial computing. Drawing on the participant accounts outlined in Section 7, it explores what such practices offer for engaging with contested urban space.

8.1. Audiowalking as Spatial Computing

The findings of Section 7 suggest that the audiowalk functions as a form of spatial computing in a practice-led, experiential sense: a situated arrangement in which geolocated sound, bodily movement, and physical space are continuously negotiated through walking and listening. This positions the format in a productive tension with dominant modes of spatial computing in urban contexts, such as data-driven urban modeling and simulation, which tend to produce comprehensive, legible accounts of urban space oriented toward predictability and control (Kitchin & Dodge, 2011). The spatial logic of the audiowalk, by contrast, is contingent and incomplete. Some of this contingency is rooted in the perceptual characteristics of audio established in Section 2. Since sound unfolds in time and surrounds rather than focuses attention, it produces an inherently situated and partial experience. This becomes particularly significant in the context of San'ya, whose histories resist the kind of stable representation that prevailing spatial computing approaches are designed to produce. Accordingly, the audiowalk did not provide an authoritative reading of the district but instead engaged participants with what is absent and officially unacknowledged.

Sound as a spatial interface has a further distinct quality. While screen-based media can also augment environmental perception, the audio layer operates without requiring any visual attention or mediation of a display. Participants described environmental sounds and bodily awareness as remaining present alongside the narration, with the audio shaping but not prescribing movement and attention. Even so, the system carried its own infrastructural demands, as attention shifted back to the screen and map whenever participants stepped outside a zone.

8.2. Spatial Structure and Participant Agency

The unusual, non-linear movement patterns participants described emerged from the interaction between the audiowalk's spatial structure and their decision-making. The zones, along with the duration and content of the audio, influenced where participants paused, how they paced themselves, and what they noticed. Beyond the macro level of the audio zones, participants were also searching for small details that were made meaningful by the narration. The findings thus indicate that the geolocation functioned not merely as a trigger for audio playback but as a spatial system that reorganized how participants moved through and attended to the neighborhood.

As it produced experience through contingency and participant-driven navigation, the audiowalk thus stands in productive contrast to the top-down spatial logic of prevailing modes of spatial computing in urban contexts that are oriented toward control and predictability.

8.3. Productive Misalignment

Accounts consistently showed that both alignment and misalignment between narration and place were experienced as meaningful. Participants described working toward a sense of narrative coherence that did not depend on perfect synchronization between audio and place. When the audio did not match their surroundings, they felt compelled to recall details and search for missing elements. Spatial and informational gaps were filled through imagination, and participants remained curious and actively engaged with their environment and the narration.

Because audiowalks, in the form that is explored here, are necessarily embedded in spaces that contain more than is anticipated and change independently of it, this friction is inherent to the medium. In contexts where historical facts are intended to be conveyed efficiently, such mismatches might be understood as a design limitation. In the case of this work, however, the findings suggest that misalignment can be a useful device for engaging with contested histories and unstable atmospheres. For San'ya, this imperfect coupling between physical site and digital content thus proved particularly productive. Places such as Kozukappara are experienced as sites whose significance had to be imagined and inferred while standing within the rhythms of everyday urban life. The audiowalk, therefore, supports an understanding of urban memory as a situational process that is shaped by encounter and interpretation.

8.4. Witnessing and Non-Monumental Memory

As described in Section 7, participants reported moments of unease due to feelings of being or being perceived as an outsider. The reasons ranged from visible foreignness and gendered vulnerability to simply understanding spaces as not socially coded for them. These feelings generally did not stem from a sense of risk, but instead were framed as social and moral questions of “intruding” by moving through a residential neighborhood with the explicit intention of observing it. This raises an important point for geolocated works deployed in socially uneven spaces where experiences of visibility and belonging are not shared equally, as the audiowalk, beyond mediating historical narratives, also mediates the relationship between walker and local life. By framing the neighborhood through a particular narrative lens, there is a risk of turning the space into an object of aesthetic or historical consumption. At the same time, the discomfort of the participants suggests that the work may also induce ethical reflexivity, as it confronts the walker with their own position and gaze.

This tension is especially relevant in the context of changing attitudes toward foreign presence, tourism, and (perceived) outsiders in Japan. It highlights that the audiowalk and its interpretation cannot be separated from its temporal context, shifts in public mood, and the politics of belonging. During times of heightened suspicion toward foreigners, a walker's sense of intruding, being watched, being judged, or not belonging becomes part of the work's contemporary meaning.

Within this context, the audiowalk positions participants as witnesses, a term and role several of them invoked. Witnessing here involves attentive presence and acknowledgment of situatedness and partial understanding, without claiming resolution or certainty. The walk sustains this unsettled position by allowing historical and narrative fragments, contemporary life, and personal interpretation to coexist. These dynamics show the potential of geolocated audioworks to support non-monumental, ethically attentive engagement with marginalized urban histories, which avoids their reduction to spectacle.

8.5. Limitations and Design Implications

While participant accounts indicate that the audiowalk shapes movement and attention, the findings also highlight limitations that could inform future versions. One issue concerns the technical boundary system. The zones produced a sense of enclosure and excitement for some participants, but were also a source of frustration, as interruptions shifted attention back to the map on the phone screen. If screen-based mediation is to be reduced, future iterations may need to reconsider how boundaries are communicated or how audio continuity is maintained. Although the Echoes platform supports features such as automatic audio resumption upon re-entry, spatialized playback, and fade-in/fade-out cues, these features were not available within the version of the software used in this study.

Another limitation concerns narrative sequencing. Some participants voiced a desire for greater linearity or more clearly defined starting points, while others valued the freedom to wander. This tension may not need to be resolved, as it can be understood as integral to the work's conceptual approach. It does, however, raise design questions about how much coherence is required for participants to feel securely oriented.

9. Conclusion

This study examined a geolocated audiowalk as a form of spatial computing and what participants' experiences revealed about audio-based spatial mediation in a historically and socially contested urban context. Through the re-staging of *placeless: San'ya* and a qualitative participant study, it explored how geolocated sound, bodily movement, and urban space interact to produce situated forms of knowledge.

The findings demonstrate that geolocated audio can function as a spatial interface that reconfigures movement and attention without displacing embodied awareness. Where dominant spatial computing approaches model the city as predictable and controllable, the audiowalk produced experience through contingency and participant-driven navigation. It shaped how participants moved, paused, and attended to their environment, but left interpretive and navigational decisions in their hands.

The study further shows the misalignment between narration and place as a productive feature. Gaps and imperfect correspondences compelled active interpretation, with participants assembling meaning through fragments and inquiry. In *San'ya*, with its contested histories and unstable representation, this mode of engagement points to an understanding of urban memory as emerging through situational encounter.

The audiowalk also foregrounded ethical dimensions that spatial computing discourse does not always explicitly address. Moving through a socially marginalized space with a narrative frame raised questions about positionality and the risk of turning places of ongoing precarity into objects of consumption. Instead

of resolving these tensions, the work rendered them perceptible and positioned participants as witnesses in an unsettled and ethically attentive sense.

For spatial computing research and urban planning, this study contributes a practice-led perspective that demonstrates how audio-based approaches can engage with what prevailing modes are not designed to accommodate. The study is necessarily situated, as it reflects a specific site, a small number of participants, and the dual role of the author as artist and researcher. Future research could build on this through comparative studies examining how different spatial logics and audio structures shape participant experience, as well as through longer-term or collaborative engagement with communities in socially contested spaces. Taken together, the findings point to a broader understanding of spatial computing, which accommodates absence, embodied attention, and ethical complexity alongside the data-driven and visual approaches that currently dominate the field.

Acknowledgments

The author would like to extend her sincere thanks to all participants for generously sharing their time, experiences, and reflections, as well as to the academic editors and anonymous reviewers for their thoughtful and constructive feedback. She would also like to thank her PhD supervisor, Christophe Charles, for his academic and artistic guidance and the organizers of Sairai San'ya for their support in producing and staging the audiowalk.

Conflict of Interests

The author declares no conflict of interests.

Data Availability

Due to the nature of the research, data sharing is not applicable to this article.

LLMs Disclosure

To assist with improving the manuscript's grammar and stylistic clarity, the author used ChatGPT (OpenAI) in some parts. Interviews were conducted primarily in English; however, several bilingual participants occasionally shifted into Japanese when expressing more nuanced experiences. As the researcher is a non-native Japanese speaker, ChatGPT and DeepL were also used to support the translation of selected excerpts from Japanese into English. These tools were used solely as aids, and all generated text and translations were carefully reviewed and manually verified against the original recordings and transcripts to ensure accuracy and contextual fidelity.

References

- Berger, R. (2013). Now I see it, now I don't: Researcher's position and reflexivity in qualitative research. *Qualitative Research*, 15(2), 219–234. <https://doi.org/10.1177/1468794112468475>
- Biserna, E. (Ed.). (2022). *Going out: Walking, listening, soundmaking*. Umland Editions.
- Biserna, E. (2024). *Walking from scores*. Les Presses du Réel.
- Bradley, S. (2016). *Archaeology of the voice: Exploring oral history, locative media, audio walks, and sound art as site-specific displacement activities* [Unpublished doctoral dissertation]. University of Huddersfield.
- Butler, T., & Miller, G. (2005). Linked: A landmark in sound, a public walk of art. *Cultural Geographies*, 12(1), 77–88. <https://doi.org/10.1191/1474474005eu317xx>

- Candy, L., & Edmonds, E. (2018). Practice-based research in the creative arts: Foundations and futures from the front line. *Leonardo*, 51(1), 63–69. https://doi.org/10.1162/LEON_a_01471
- Cardiff, J. (2005). *The walk book*. Thyssen-Bornemisza Art Contemporary.
- Careri, F. (2002). *Walkscapes: Walking as an aesthetic practice*. Gustavo Gili.
- de Certeau, M. (1984). *The practice of everyday life*. University of California Press.
- de Souza e Silva, A., & Sheller, M. (Eds.). (2014). *Mobility and locative media: Mobile communication in hybrid spaces*. Routledge.
- DeVos, G. A., & Wagatsuma, H. (1967). *Japan's invisible race: Caste in culture and personality* (2nd ed.). University of California Press.
- Dourish, P. (2001). *Where the action is: The foundations of embodied interaction*. MIT Press.
- Echoes.xyz. (n.d.). *Geolocated audio tours & experiences*. <https://echoes.xyz>
- Enosh, G., & Ben-Ari, A. (2015). Reflexivity: The creation of liminal spaces—Researchers, participants, and research encounters. *Qualitative Health Research*, 26(4), 578–584. <https://doi.org/10.1177/1049732315587878>
- Farman, J. (2012). *Mobile interface theory: Embodied space and locative media*. Routledge.
- Fowler, E. (1996). *San'ya blues: Laboring life in contemporary Tokyo*. Cornell University Press.
- Fukushi Zaidan. (n.d.). *San'ya area*. <https://www.fukushizaidan.jp/401johoku/sanyachiiki>
- Gill, T. (1994). Sanya street life under the Heisei recession. *Japan Quarterly*, 41(3), 270–286.
- Gordon, E., & de Souza e Silva, A. (2011). *Net locality: Why location matters in a networked world*. Wiley-Blackwell.
- Haraway, D. (1988). Situated knowledges: The science question in feminism and the privilege of partial perspective. *Feminist Studies*, 14(3), 575–599.
- Huyssen, A. (2003). *Present pasts: Urban palimpsests and the politics of memory*. Stanford University Press.
- Ihde, D. (2007). *Listening and voice: Phenomenologies of sound* (2nd ed.). SUNY Press.
- Jinnai, H. (1995). *Tokyo: A spatial anthropology*. University of California Press.
- Kahan, K. (2025, April 28). Reclaiming Sanya, one meal at a time. *The Japan Times*. <https://www.japantimes.co.jp/community/2025/04/28/issues/sanya-cafe-yoshihira>
- Kitchin, R., & Dodge, M. (2011). *Code/space: Software and everyday life*. MIT Press.
- LaBelle, B. (2019). *Sonic agency: Sound and emergent forms of resistance*. Goldsmiths Press.
- McCurry, J. (2019, June 14). The Tokyo neighbourhood where people come to disappear. *The Guardian*. <https://www.theguardian.com/cities/2019/jun/14/the-tokyo-neighbourhood-where-people-come-to-disappear>
- Nikkei. (2016, December 12). Shinagawa-ku ni “Namidabashi,” Arakawa-ku ni “Namidabashi”: Sono na no yurai. *Nikkei Online*. <https://www.nikkei.com/article/DGXKZO10562640S6A211C1L83000>
- Pink, S. (2015). *Doing sensory ethnography* (2nd ed.). Sage Publications.
- Rimini Protokoll. (n.d.). *Remote X*. <https://www.rimini-protokoll.de/website/en/project/remote-x>
- SAIRAI Art Fest. (n.d.). *Sairai Sanya Geijutsusai*. <https://sairai-artfest.com>
- Schafer, R. M. (1977). *The tuning of the world*. McClelland and Stewart.
- Takada, T. (2018, January 12). Osaka “Airin chiku” no saikaihatsu, Nihon saidai no doya-gai wa do kawaru no ka. *Bijinesu + IT*. <https://www.sbbit.jp/article/cont1/34444>
- Takeuchi, M. (2020). *Myo na senro dai kenkyu: Tokyo hen*. Jitsugyo no Nihonsha.
- Voegelin, S. (2010). *Listening to noise and silence: Towards a philosophy of sound art*. Continuum.
- Westerkamp, H. (1974). Soundwalking. *Sound Heritage*, 3(4), 18–27.

About the Author



Lisa Woite is an artist and doctoral candidate at Musashino Art University, Tokyo. Her research examines site-specific audiowalks as a means of engaging with non-monumental urban histories through embodied movement and listening. Her work has been shown at Museum für Fotografie Berlin and Lichtsicht Projection Triennale, among other venues.