

Sampling: Sound Embodiment and Dancing Sounds. A Choreographic Duo

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Abstract

This paper investigates *Sampling* (2014), a collaborative work created with Lorena Nogal, which integrates dance, sound performance, and movement art. Inspired by the musical production technique of sampling, *Sampling* is a living collage in constant modulation, exploring corporeality and embodiment through an innovative interplay of sound and movement. By examining the ontological status of sound and movement within the piece, this paper argues that *Sampling* transcends the conventional framework of a solo dance performance accompanied by sound. Instead, it posits *Sampling* as a true dance duo, where sound assumes the role of an equal performer, engaging in a dynamic dialogue with the dancer's movement. This analysis delves into the tangible, relational and generative capacities of sound, demonstrating how it becomes an active agent in shaping the spatial-temporal dynamics of the performance. Furthermore, the paper explores the role of technology in augmenting the embodied experience, examining how the use of a multi-channel speaker system creates an immersive sonic environment that blurs the boundaries between performers and audience.

Keywords: embodiment, aurality, sound dramaturgy, space, dance, corporeality, performance, sound, materiality, time, dialogue, sound performance, real-time

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Introduction

This paper argues that *Sampling*, a collaborative work created in 2014 with Lorena Nogal, is not merely a solo contemporary dance performance with a sophisticated sound design but a true dance duo, where sound assumes the role of an equal partner, engaging in a dynamic and reciprocal dialogue with the dancer's movement. By examining the ontological status of sound and movement within the piece, we can understand how this collaboration transcends traditional hierarchies and creates a new paradigm for performance.

Traditionally, sound in performance arts has been relegated to the role of support (foreword by Sellars in Kaye and Lebrecht, 2009). It functions as “sound design”, “soundscape”, “background sounds”, a tool to create atmosphere, enhance realism, or provide a backdrop for the action. This approach, while effective in certain contexts, limits the potential of sound as a performative force. It reduces sound to a mere illustration or accompaniment, and creates, willingly or unwillingly, a hierarchy of the mediums that make theatre what it is.

In the limited literature that deals with sound and performance arts, two volumes — *Sound and Music for the Theatre: The Art and Technique of Design* by Deena Kaye and James Lebrecht (2009) (described as “the most beloved guide for sound and music for the stage”), and *Theatre Sound* by John A. Leonard — are noteworthy and offer clear examples of what can be considered the traditional use of sound in stage performances.

The objective of these texts is clearly to serve as reference manuals for students and practitioners interested in stage sound. They cover the know-how, the processes of creation, reproduction, and application of sound in performance arts, ultimately acting as representations or syntheses of the conventional possibilities of sound on stage.

In the introductory chapter of *Sound and Music for the Theatre*, a paragraph states:

Music and effects used in production fall into four categories: Framing cue (preshow, entr'acte, and curtain call), underscoring, transitional sound/music, and specific cues. Framing cues act as the bookends of a production. They exist outside the actual action of a play. [...] Underscoring accompanies the action of a scene and is not heard by the characters on stage. Its purpose is to underline the emotions of the moment, to maintain the focus of the scene. [...] Transitional sounds or music represent a movement of the action through time or place. They exist outside of the action and can link one scene to the next. [...] Specific cues — while not devoid of emotional appropriateness — are more informational in purpose than the other forms, and are aural events that form part of the theatrical event (Kaye and Lebrecht, 2009, p. XX).

The authors go on to state that sound must reflect what is happening on stage — if not at a realistic level (as would be possible in a play), then at a coherent level in relation to what is proposed on stage, a concept applicable to a dance piece. While acknowledging that sound in performance can take on different forms (the realistic approach and the stylistic approach), the authors never suggest that sound itself could be the performance. It is always positioned as one element within a larger work, ultimately in service to the choreographer, director or performer. John A. Leonard follows a similar perspective, outlining five uses of sound effects: information, textual reference, mood creation, emotional stimulus, and cues (Leonard, 2001).

It is telling that both volumes — published eight years apart and originating from different countries — take the same stance on the relationship between sound and stage. Sound serves a purpose; it is not the purpose.

In *Sampling* the stage is bare, demarcated only by a configuration of eight speakers (see Figure 1) and four linear arrangements of lights. A faint illumination gradually reveals the space. As a deep, growling bass penetrates the environment, performer Lorena Nogal initiates the movement with only her right elbow and arm. The gestures are irregular, abrupt and disconnected, each body part appearing isolated from the whole. At the time of this performance, Nogal was engaged with La Veronal in the early stages of developing the Kova method (a choreographic approach that prioritises spatial awareness and body precision over organic flow or emotional expression. Kova consciously resists instinctual or habitual movement patterns, advocating instead for a process of choreographic decision-making rooted in fragmentation, mechanical articulation, and body control. The dancer appears as if navigating her own body like a robotic entity, every action the result of deliberate cognitive effort). There is a sense of constraint; it is palpable to the audience. Nogal's movement carves out space against the dense sonic presence of low frequencies. Gradually, subtle auditory textures — small clicks — start to move within the space. The motion begins to travel through her body: from the elbow to the neck, then the head, rendered through rapid, saccadic gestures. The sequence flows into the torso, punctuated by moments of stillness and silence that interrupt both performers. The low frequency information reappears and coincides with a reactivation of the light fixtures, mounted on poles, which begin to assert their own spatial

presence. The choreography evolves into a game of contrasts. Performers and lights engage in an interdependent dialogue, shifting axes and directionalities. The physical and auditory elements move fluidly between clearly directed gestures and more abstract configurations. This interplay results in a collective invasion of the performance space, which becomes saturated with movement, light and sound, collapsing the boundaries between performer and environment. At times, axes are clear and marked; at times, everything diffuses.

In *Sampling*, dance defines its own space while sound sculpts it. The space transforms into an instrument, modulated by the two performers and their expressive techniques. Like dance, sound in *Sampling* moves through space at variable speeds and accelerations, generating a spatial field where the senses converge. The performance area is defined by eight strategically placed speakers, enclosing the audience, the sound performer, and the dancer within this delimited zone.

The configuration of eight speakers enables the creation of a complex visual and sonic field where every element — audience and performers alike — comes together in a shared experience. The dancer is positioned facing the audience, while the sound performer stands behind them. The two engage in a dynamic interaction with each other's artistic material. The sound performer uses pre-recorded sounds from various sources (samples) as well as live-created sounds. All these elements are modulated and spatially positioned in real time with the help of a specific interface that technologically enables the sound performance to modulate and position sound with dancing precision through the eight-speaker system. Using a tactile interface on a tablet, the performer can position sound within the eight speakers by placing their fingers on the touchscreen. The signal can be sent either to all eight speakers simultaneously or directed to individual speakers. This allows, as previously mentioned, for a clear sense of axis, directionality, and spatial diffusion to emerge. In a way, it becomes a choreography of the fingers as they move across the touchscreen surface (see Figure 1). The interface communicates bidirectionally with the computer's digital audio workstation via the Open Sound Control (OSC) protocol: it sends information about sound placement and receives feedback on the current sound position.

Sampling explores decomposition and re-composition, weaving a tapestry of reminiscences that underscores the exchange between the two artists. The interplay of sound and movement creates a vibrant dialogue where sound becomes tangible, dance becomes audible, and space is continuously reshaped by their interaction. Together, the performers transform the performance area into a living, breathing entity, inviting the audience into an immersive and ever-evolving artistic experience.

Sampling thus transcends the conventional boundaries of dance and sound performance. It is not simply a dance piece with an accompanying soundtrack; rather, it is a dynamic interplay between two equally potent forces. Central to this exploration are the concepts of embodiment and corporeality.

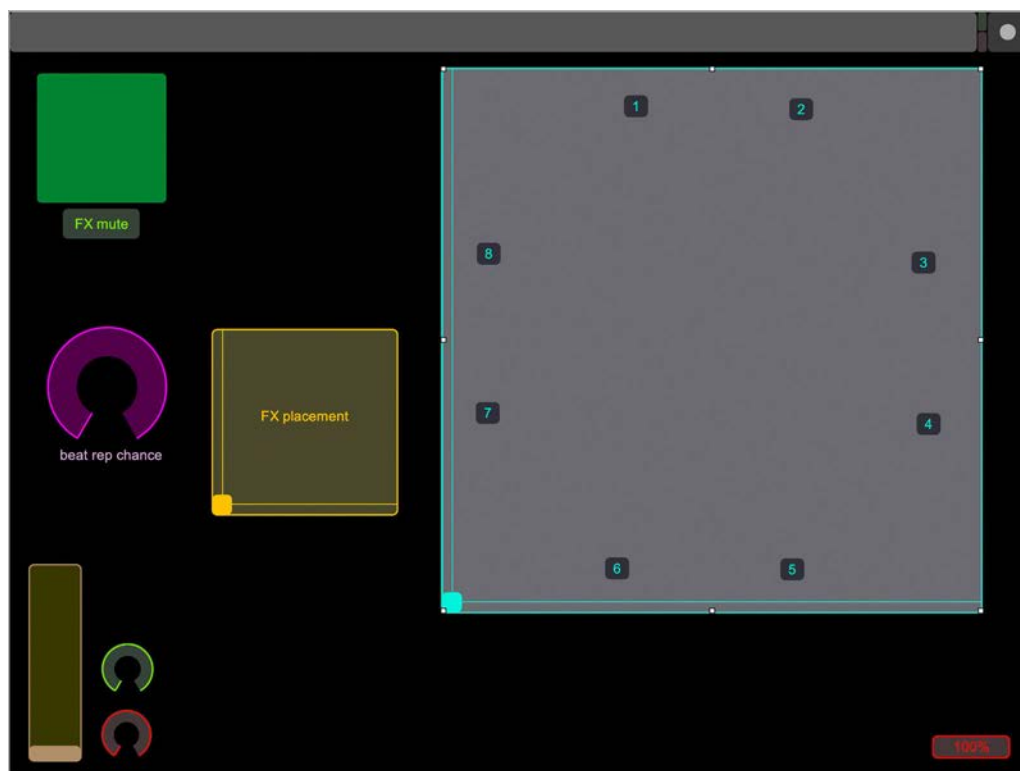


Figure 1. The OSC remote control. Source: the author.

Embodiment and corporeality

The core of *Sampling* lies in the shared ground of corporeality and embodiment. While often considered distinct, sound and movement possess inherent corporealities. Movement, as a physical manifestation of intention and emotion, is undeniably corporeal. The dancer's body, through its gestures, its dynamics, and its spatial trajectories, embodies a range of emotions, ideas and experiences. How about sound?

Sound, often perceived as an abstract or ephemeral phenomenon, also possesses tangible qualities. The act of producing sound invariably involves a physical interaction. Whether through the vibration of vocal cords, the striking of an instrument, or the manipulation of electronic devices, sound emerges from an oscillation, a physical act. This physicality extends beyond the source. The propagation of sound waves through a medium, such as air or water, is a physical phenomenon. The reception of sound, through the auditory system, is a physiological process that engages the listener's entire body (Brown, 2010). The vibrations of sound waves are transmitted through the bones of the skull, resonating throughout the body and creating a visceral experience. This embodied reception transforms sound from a mere physical event into a shared, intersubjective experience.

In *Sampling*, embodiment is understood as the tangible manifestation of ideas, qualities and feelings. This understanding draws upon Merleau-Ponty (1976), who emphasises the embodied nature of perception and the intersubjective nature of experience. For Merleau-Ponty, the body is not merely a passive receptacle of sensory information; it is an active agent that shapes and

is shaped by its environment. This embodied perception, grounded in lived experience, provides a framework for understanding how both sound and movement can become ‘tangible’, a materiality within the performance space.

This shared corporeality, grounded in the physicality of production, propagation and reception (through time and space), provides a common ground for sound and movement to interact and engage in a dialogue. In *Sampling*, this dialogue is not merely a superficial juxtaposition of sound and movement, but a deep and intricate interplay where each element informs and shapes the other. The dancer’s movement responds to the shifting currents of the sound material, while sound, in turn, is modulated by the dancer’s presence and the dynamics of their movement. This dynamic interplay creates a continuous feedback loop, where each element constantly informs and shapes the other. This circular relationship has been present since the beginning and is deeply rooted at the base of *Sampling*’s creation process.

Performing sound / sound performer

Lynne Kendrick’s concept of *theatrical aurality* provides a valuable framework for understanding sound as a performative art form in its own right. Aurality, like dance, is a form of embodied expression that engages the audience on multiple levels. It utilises the unique qualities of sound — its spatialisation, its capacity to modulate time and space, its ability to evoke emotions and create associations — to produce a distinct and pure theatrical experience.

Theatrical aurality, according to Kendrick, encompasses a wide range of sonic phenomena, from the spoken word and musical performance to the sounds of the environment and the audience’s own bodily responses. It recognises that sound is not merely a passive element in the theatrical experience; it is an active agent that shapes the perception and interpretation of the performance. Sound, aurality, is a form of theatre (Kendrick, 2017).

Sampling embraces this concept of theatrical aurality. Sound is not merely a backdrop or an illustration of the dancer’s movements; it is an active participant in the performance, shaping the spatial-temporal dynamics and engaging the audience in a unique and immersive experience. The sound material in *Sampling* is not simply a pre-recorded track played back during the performance; it is a dynamic and evolving entity, constantly dialoguing and talking to the dancer’s movement and the audience’s presence.

While it is intuitive to understand how a dancer can modulate and articulate the stage’s relationship with time and space through movement — using tools we naturally relate to, such as body parts, muscles and gestures —, it is far more challenging to grasp how sound can achieve a similar transformation of theatrical space.

How can the expressiveness of an arm, a hand, or a torso be transferred into sound? This can be accomplished by channelling expressive qualities — essentially human qualities — into the four fundamental elements of sound modulation: amplitude, frequency, timbre, and referentiality (three physical and one psychological).

The physical limitations of sound (its intangible form) demand that we expand its expressive possibilities by designing a tool capable of *playing* sound in the fullest sense of the word as the French term *jouer* suggests, meaning both *to act* and *to play*. Such a tool must allow for human/organic control of sound in a choreographed and dynamic way, enabling the manipulation of the three physical elements (amplitude, frequency, and timbre). To achieve this, the creation process must include the development of this instrument and a dedicated period to master its use.

This approach implies the need for a sound performer — a “sound dancer”, if you will — who participates live in the performance. This performer, acting through and with sound as an extension of their own body, becomes a co-creator on stage. In this way, the sound performer and the dancer form a duo, playing and dancing together, each shaping and engaging with the other in a dynamic exchange of expression.

Embodied space

Space is another element ontologically tied to sound and to theatre — here understood as the stage, the place that hosts performative forms (dance, theatre, visual arts, opera, hybrid forms...). This aligns with one of the possible translations of the ancient Greek definition of the word *theatron*, to contemplate. Contemplation cannot be limited only to the visual sense; and since in those times poets were involved, it would be hard to deny that the audience also went to *listen* to the poet rather than simply to *see* them.

The model of ancient Greek theatre and the Elizabethan theatre (such as the Globe) were types of spaces that created a global theatre/life experience. Their nearly circular forms encompassed all elements of theatrical performance, integrating sound as an essential part of a unified whole. The emergence of the Italian stage (black box style theatre) and illusion-based theatre marked a clear division between the audience’s space and the performance space. What exists *there* becomes another world entirely. We could say that Italian theatre displays and exposes, while Greek and Elizabethan theatres incorporate and involve. With the advent of sound amplification in theatre, a new spatial possibility emerged which involves shaping a shared space through what Frances Dyson refers to as technically augmented embodiment (Dyson, 2009).

The (re)configuration of a space through amplification allows for the creation of a global theatre aurality without the need for a specific architectural design. It also enables the perception of sonic materiality through movement, depth, and again the reconfiguration of space. This fosters an immersive relationship — immersive in the sense of being *inside*, evoking a feeling of interiority, even intimacy, between the audience and the performers, a sort of shelter compelling the audience to adopt an active mode of listening, as a space where “you see with your ears and listen with your eyes” (Wilson, 2025).

In *Sampling*, the spatialisation of sound plays a crucial role in establishing its performative agency. The piece utilises eight speakers strategically

placed around the performance space, creating a dynamic and immersive sound/space. These speakers are not merely passive transmitters of sound; they become active agents in shaping the performance.

By manipulating the directionality, intensity, and timbre of sound emanating from each speaker, the piece creates a constantly shifting sonic environment. This dynamic spatialisation engages the audience's sense of hearing in a profound way, inviting them to actively listen and to become attuned to the subtle shifts and modulations of the sound material. The sound moves through the space, weaving its way around the audience, creating a sense of immersion and enveloping them in a sonic cocoon.

This spatialised sound, in turn, interacts with the dancer's movement. The dancer navigates this sonic landscape, responding to the shifting currents of sound, while simultaneously influencing the soundscape through their own movement. Their gestures, their dynamics and their spatial trajectories all contribute to the shaping of the sonic environment and vice versa.

This interplay creates a dynamic and ever-evolving relationship between the dancer and the sound/sound performer, where each element constantly informs and shapes the other. The dancer's movement is not simply an illustration of the sound; it is an integral part of the sonic landscape, contributing to and nurturing its shape, its texture, and its emotional impact.

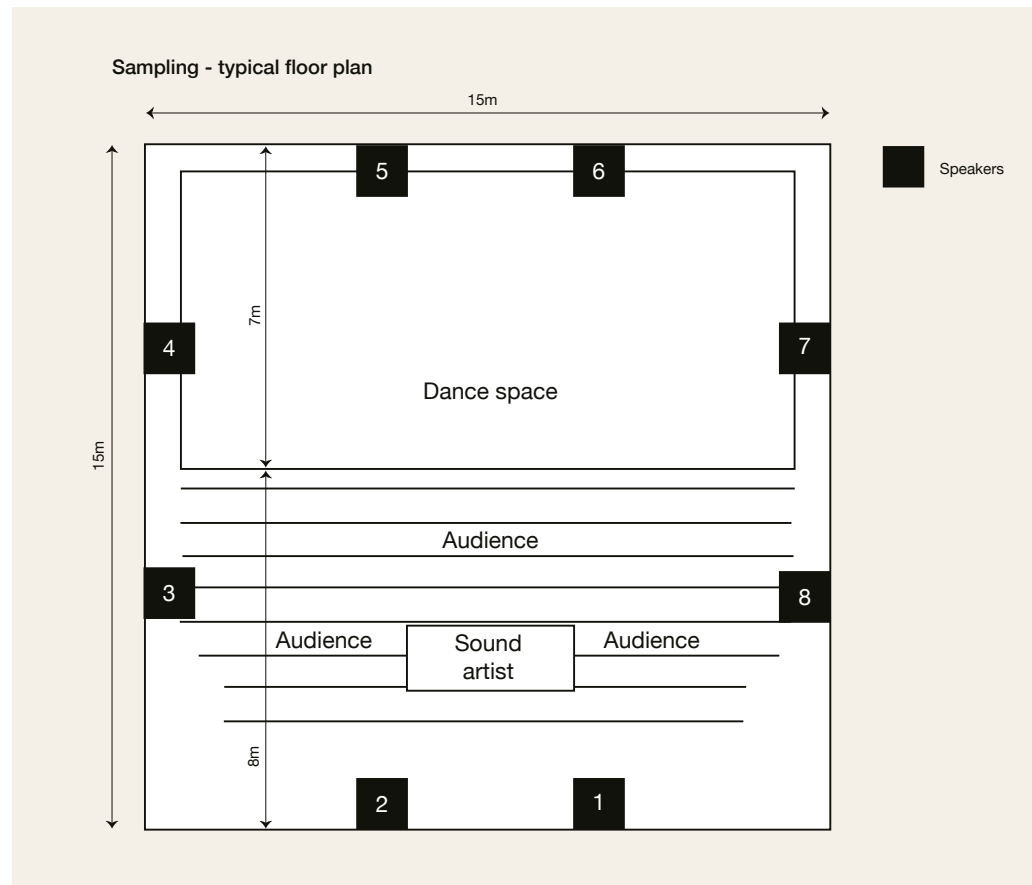


Figure 2. Sampling's floorplan. Note the 8 speakers arrangement. Source: the author.

Shared embodiment and relationality

Dance and aurality, despite their apparent differences, share fundamental similarities. Both are temporal arts that unfold in time, engaging the audience in a shared experience of movement and transformation. Both are inherently relational, existing in and through their interaction with space, time and the perceiving subject.

As many have argued (for example see: Magnani, Oliveri and Frassinetti, 2014; Stanger, 2015; Gat, 2015), dance is a fundamentally relational art form. It exists not in isolation, but in relation to space, the dancer's body, the audience, and the cultural and historical context within which it is performed. This relationality is not merely a social or cultural phenomenon; it is deeply embedded in the very nature of movement itself. Movement is a dynamic process that unfolds in time and space, constantly responding to and interacting with its environment.

Similarly, sound is inherently relational, its existence depends on a series of interconnected physical and cognitive factors: a sound source, a medium of propagation, and a receiving subject. Sound cannot be separated from time and space and its escorting paradox: which defines which? Is it sound that defines space or space that defines sound?

As we have shown, dance can be understood as the modulation of space and time, while sound operates as a pure modulation of these same dimensions. On a conceptual level, and through the intentional configuration of space and sound materials, we can argue that sound itself can dance. This is because both sound and dance share a common relational foundation, where each continuously interacts with and shapes the other.



Figure 3. Lorena Nogal at the start of *Sampling*. Source: the author.

In this sense, *Sampling* becomes a true dance duo, where sound is not merely an accompaniment but an active, embodied performer in its own right, co-creating the performance alongside the dancer.



Figure 4. *Sampling*, light and performer dialogue. Source: the author.



Figure 5. Lorena Nogal in *Sampling*. Source: the author.

Conclusion

In *Sampling*, the convergence of dance and sound challenges traditional performance hierarchies, establishing both elements as equal, interdependent partners. This work redefines the boundaries of corporeality and aurality, demonstrating that sound, like movement, possesses a tangible, embodied presence. By exploring the relational dynamics of space, time, and perception, *Sampling* creates an immersive, shared experience that engages the audience in a profound dialogue of transformation.

The innovative use of sound as an active performer, facilitated by technology, underscores the ontological equivalence of sound and movement. The dancer's gestures and the sound performer's manipulations coalesce into a dynamic interplay, where each element continuously shapes and responds to the other. This partnership transcends the conventional roles of accompaniment and choreography, instead crafting a new paradigm of shared embodiment.

Moreover, the spatial configuration of the performance — enabled by strategically placed speakers and the integration of movement and sound — reclaims the immersive intimacy of ancient performance spaces. By dissolving the boundaries between performer, audience and environment, *Sampling* invites us to reconsider the nature of relationality in performative arts. Ultimately, the work exemplifies how sound can “dance”, not as a metaphor but as a lived, embodied phenomenon.



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