Hyperwilding: Sonic Perplexity as Urban Acupuncture to Promote Environmental Kinship

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ABSTRACT

This paper invites discussion of how sound art installations, specifically those situated in urban environments, can serve as respite from urban stressors as well as advocate for increased awareness and engagement of acoustic ecology. The author invokes the theoretical framework of Karen Barad to juxtapose the Urban Acupuncture movement with the Solarpunk ethos, arguing that sound installations may be crafted as agential cuts to the entangled relationship of humans and their built environments. This paper surveys sound artists that have specifically engaged the urban space-an environment that one could argue is more "natural" to humans than the remote picturesque landscapes commonly associated with the concept. Finally, the author describes some of his past sonic interventions and expounds on his current project, "Standing Wave," commissioned by the city government and non-profits to address Extreme Urban Heat. He discusses how this installation, coupled with targeted community engagement through "Environmental Listening" workshops, urges us to rethink the temporality of intervention, recognizing that long-term strategies, while not immediate solutions, are crucial for future cooling and remediating the effects of climate change.

Author Keywords

Agential Realism, Urban Acupuncture, Solarpunk, Entanglement, Acoustic Ecology, Sustainability, Public Art

1. INTRODUCTION

Amid escalating urban density, environmental degradation, and the pervasive hum of technological life, sound art installations offer a unique modality for both respite and critical engagement. This paper explores how site-specific sonic interventions within urban environments can function not only as aesthetic experiences but also as catalysts for environmental awareness and civic reflection. Drawing on Karen Barad's agential realist framework [1], sound art may be viewed as an active force-an "agential cut"-that reveals and reshapes the entangled relationships between humans and the built environment. By juxtaposing the precision-oriented interventions of the Urban Acupuncture movement with the speculative optimism of the Solarpunk ethos, sound installations have the potential to disrupt habitual modes of perception, fostering an attunement to acoustic ecologies often rendered invisible by the relentless pace of city life. Through this lens, sound art becomes more than an auditory experience; it emerges as a form of ecological activism and urban critique, capable of both soothing the individual psyche and challenging collective environmental complacency.

2. URBAN ACUPUNCTURE

Urban Acupuncture is a socio-environmental and architectural concept that applies the principles of traditional Chinese acupuncture to urban design. Just as acupuncture targets specific points on the



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human body to stimulate healing across the entire system, Urban Acupuncture focuses on small-scale, strategically placed interventions within the urban fabric to catalyze broader environmental, social, and psychological transformations. This approach challenges the conventional paradigm of large-scale urban planning, favoring instead localized, community-driven projects that create ripple effects throughout the city.



Figure 1. Urban Acupuncture: Metaphorical Approach

The term gained prominence through the works of Brazillian Architect and Urban Planner, Jamie Learner [2], and Finnish architect and theorist Marco Casagrande, whose writings and projects frame Urban Acupuncture as a form of "soft" intervention—subtle yet powerful disruptions that reawaken the latent potential within neglected or underutilized urban spaces [3]. Casagrande's vision draws from a confluence of influences, including psychogeography, the Situationist International movement, and indigenous ecological practices. Psychogeography, popularized by Guy Debord and the Situationists, emphasized the emotional and behavioral effects of urban environments on individuals, advocating for derives, or "drifts," through the city to uncover hidden narratives and spatial dynamics. This ethos resonates within Urban Acupuncture, where the act of identifying specific points for intervention often arises from intuitive, embodied explorations of urban space.



Figure 2. The Highline, New York (before/after)

In practice, Urban Acupuncture manifests through projects that range from micro-parks and guerrilla gardens to pop-up installations and temporary art interventions. These projects often prioritize sustainability, social interaction, and environmental restoration, aiming to reconnect urban dwellers with their surroundings. By targeting the "pressure points" of urban life—such as abandoned lots, traffic-dominated streets, or neglected waterfronts—Urban Acupuncture seeks to reanimate public spaces, foster ecological resilience, and cultivate a sense of place within the ever-evolving urban landscape.

3. SOLARPUNK

Solarpunk is both an aesthetic and a socio-political ethos that envisions a future rooted in sustainability, community resilience, and ecological harmony [4]. It imagines a world where technological advancement coexists with environmental stewardship—a hopeful counternarrative to the dystopian tropes that pervade speculative fiction. The essence of Solarpunk is a challenge to the inevitability of climate catastrophe, proposing instead a vision of regenerative living shaped by renewable energy, green infrastructure, and localized, cooperative economies. This ethos is not just utopian theory—it emphasizes praxis, calling for tangible, grassroots actions that can lead to the sustainable futures it imagines [4].

Solarpunk responds to the dystopian images like cyberpunk and steampunk by reclaiming technology as a force for ecological regeneration and social equity. The ethos emerged around 2008 in online communities; its aesthetic blends Art Nouveau, afrofuturism, indigenous knowledge, and contemporary sustainable design practices.



Figure 3. Paulo Soleri's Arcosanti

Solarpunk also intersects with contemporary urban planning and architectural movements that prioritize sustainability and ecological integration. The rise of green architecture, vertical farming, and biophilic design reflects Solarpunk principles in practice, blurring the boundaries between speculative fiction and real-world environmental design. Through its synthesis of art, activism, and speculative thinking, Solarpunk serves as both a critique of extractive capitalism and a blueprint for reimagining human relationships with technology, community, and the natural world.

4. AGENTIAL REALISM AND SONIC INTRA-ACTIONS

Karen Barad's agential realism offers a framework to consider urban sound installations as an intersection of Urban Acupuncture and the Solarpunk ethos. The cornerstone of Barad's theory is the concept of the "agential cut"—not a simple division, but a dynamic process through which distinctions between entities (subject vs. object, human vs. environment) are materially entangled. In this view, reality is not composed of discrete, pre-existing objects but is continually produced through entangled intra-actions—relations that complicate the perceived boundaries and mingle to properties of seemingly disparate things. This smearing of distinction allows us to reconsider urban sound installations as more than passive aesthetic experiences; they become active agents that co-evolve and configure anew the relational dynamics within urban environments.

Urban Acupuncture, with its emphasis on small-scale, sitespecific interventions, operates as a form of agential cutting within the urban fabric. Be it a community garden or a sonic

installation, each intervention functions not merely as an addition to the city but as a disruption that reveals blockages and reorients the underlying flows of energy, attention, and meaning. These interventions often elicit a moment of disorientation, and this perplexity acts as pressure upon strategically located points to stimulate broader systemic transformations. In this context a sound installation can be considered an especially potent form of Urban Acupuncture because of its ephemeral, boundary-defying qualities. Unlike physical structures, sound permeates walls, intertwines public and private spaces, and viscerally engages the body in intimate yet collective ways. A sound installation is itself permeable and allows preexisting ambient sounds to pass through. Its site-specific design can draw attention to the immediate yet latent hum of infrastructure or the subtle rhythms of non-human life-the unnoticed acoustic ecologies of the urban space. The listener's perception can thus be diffracted to foster a heightened awareness of their entanglement with the environment.

Viewed through agential realism, Urban Acupuncture and Solarpunk are complementary: the former enacts precise, localized shifts while the latter speculates on systemic reconfigurations. An urban sound installation bridges these modes, serving as both immediate intervention and speculative gesture—a sonic piece that synthesizes approximations of urban wildlife amidst traffic noise disrupts the present acoustic landscape (Urban Acupuncture) while evoking futures of multispecies urban coexistence (Solarpunk).

From Barad's perspective, the act of listening itself is an agential cut, a practice that enacts new relationships between the listener, the soundscape, and the urban environment. Sound art, therefore, is not just about what we hear but about how hearing alters and reconfigures our state, our being-in-the-world. It operates at the intersection of Urban Acupuncture's tactical precision and Solarpunk's visionary scope, offering a medium through which we can both critique the present and imagine possible futures that resonate as undercurrents and enrich the audible.

5. SUBTLE SYNTHETIC URBAN RECONFIGURATIONS



Figure 4. Max Neuhaus installing Times Square

Urban sound installations that incorporate unabashedly synthetic sound within pre-existing environments challenge conventional notions of both natural and artificial soundscapes. These works do not merely impose sound onto a space but instead act as acoustic reconfigurations that draw attention to the entanglement of human presence, technology, and environmental forces. They resist obvious attempts to superficially ameliorate spaces by exploiting natural elements as a coverup and depart from the performative (and often deceptive) practice of "green-washing." By embedding intentionally artificial sonic elements within urban contexts, these installations destabilize our perception and induce a state of perceptual perplexity—they disrupt passive listening habits, cultivating new ways of relating to space.

Interestingly, these reconfigurations are most dramatic when they are subtle. Sound has the ability to shape experience, even when it lingers just beyond the threshold of conscious attention. In urban environments, where the auditory landscape is dense with layered signals like mechanical rhythms and distant conversations, many artists have explored ways of embedding synthetic sonic interventions that do not demand attention but subtly alter spatial perception. These works exist in the periphery, on the precipice of awareness, shaping the listener's relationship to space without overwhelming it.

Max Neuhaus' *Times Square* (1977-1992, reinstated 2002) is a prime example. Hidden beneath a grate on a bustling pedestrian island in Times Square, a giant megaphone emits a continuous, low-frequency drone [5]. The sound is subtle, underlying the urban noise, creating an uncanny auditory presence that most passersby experience without realizing it exists as a synthesized intervention—it exists as a presence that may go unnoticed—until it is; then it changes how everything around it is heard.

Janet Cardiff's High Line Soundwalks (2010-present) flips this paradigm by foregrounding the synthetic experience. She uses headphones to play pre-recorded sounds, and participants hear layered soundscapes in which real-time live ambient sound of the urban environment trickle in and blends so seamlessly that listeners drift between real and imagined auditory spaces [6].



Figure 5. Silent City - Robin Minard

In *Silent Music* (1994-present) Robin Minard creates site-specific installations that integrate tiny speakers into natural or architectural environments, producing barely perceptible soundscapes that are dense and complex and can transfix the attention for hours, or be ignored completely, receding effortlessly into the ambient noise—an auditory presence that is felt more than it is consciously registered [7].

These pieces do not insist on being heard. Instead, they inhabit the borderline between presence and absence, enriching the acoustic field in ways that are both immersive and ephemeral. This approach aligns with ideas from Karen Barad's agential realism, in which the built environment is not a static container but an intra-active field, where sound, material, and listener co-construct reality. Sound is not merely experienced but participates in shaping spatial meaning.

6. HYPERWILDING

The author's own research-creation comes from a long-standing practice of poetry (as mush a sonic as semantic art) and non-linear narratives, as well as event-based installations that incorporate sitespecific distributed-audio and responsive spatial design.

Recent years have witnessed an intensification of research interest in the relationship of sound, environment and architecture. The prevailing principles of the following works are that a) they are encountered naturalistically—any sensing required by installations must be passive and not require passerby to don any trackers or augmentations that may condition the encounter or negate the possibility of surprise; b) that the installation can only be experienced physically in a space, that these are somatic exploration that cannot be replicated in virtual environments; and c) they concede that the urban environment is as "natural" (if not more so) than the remote picturesque scenes commonly associated with the concept of nature.

6.1 A Path Unfolding



Figure 6. A Path Unfolding (2020)

A site-responsive sonic art installation that transforms a dirt trail adjacent to a dried-up ditch into an aurally lush path to promote wellness and walking meditation. April 2020, the flow of people on this path had increased as the locals grow listless of containment, of social distancing measures in response to the Corona virus. A Path Unfolding used the calming tones of bells and singing bowls and various forms of synthesis to transform a 50-foot stretch of this dirt path into a meditative space. The project was inspired by the practice of "walking meditation" and used the aforementioned tones along with such sounds as waves on the shore, wind in the trees, the trickling of a stream, or a rain's fluctuating rhythms. These nature sounds were purposefully incongruent with the dry canal and served to bring passerby into the moment, to distance them from their worries by presenting something unusual in the present. This installation included 24 miniature guitar amps connected to 6 battery-powered Bela boards, with each amp receiving a independent channel of granulated audio. The Bela boards used photo resisters and ultrasonic sensors to detect movement (proximity of passerby) and the changing of daylight to dusk to modulate synthesis parameters.

6.2 HyperWilding



Figure 7. HyperWilding (2022)

An audio-reactive environment in which the vocalizations of gallery patrons are transmuted into animal voices and visual expressions in a mixed-media ecosystem. Initially conceived as a two-room diptych, Hyperwilding is a campanion to 'Rewilding', a video installation by the artist Patricia Sannit. The concept of 'rewilding' refers to a form of conservation that emphasizes remediation of natural spaces through minimizing human impact. Conversely, the author dubbed the term 'hyperwilding' as the practice of curating pseudo-rewilding ventures that simulate 'wilderness' as an exaggerated artificial construction that introduces a dissociative context.



Figure 8. HyperWilding (2022)

This installation features 10in ceramic ears that are individually mic'd to independent audio channels. Max/MSP is used to perform spectral analysis on the vocalizations of patrons which are then resynthesized as the articulations of abstract woodland creatures. A cascading series of visual and sonic expressions return from the 'environment'.

6.3 Standing Wave



Figure 9. *Standing Wave* – structural (2024-2025)

Standing Wave is one of several public art installations commissioned by Bloomberg Philanthropies in partnership with the City of Phoenix Office of Arts and Culture to address extreme urban heat. The overarching project is entitled *¡Sombra!* which translates to "shade." Notably, *Standing Wave* is an experimental response in that it does not provide much shade. Instead of rejecting sunlight, it leverages solar energy to transform a space into captivating, contemplative sonic art. The installation consists of a lightweight undulating lattice woven from strips of flexible wood and resembling a soundwave. This physical structure serves as a canopy that houses 30 miniature sonic modules that create an immersive, generative soundscape. These modules are made of simple but creatively modified circuits. The "circuit-bent" electronics translate environmental conditions such as sunlight, heat and shade into a synthesized sonic experience. As visitors walk through the structure, they enter an acoustic space augmented with electronic sounds that emulate chirping birds and chattering insects. This blending of natural forces and synthesized space asks that we consider our influence on our surroundings while appreciating the richness of our sound ecology.

Standing Wave is experimental in that it plays with public expectations about what a shade structure traditionally does, thereby shifting the conversation from immediate relief to a deeper reflection on climate change. It resists the impulse for a quick fix for urban heat and invites us to engage in a meditation that may not offer instant physical comfort but creates space to practice "environmental listening." This perceptual exercise cultivates an awareness that is essential to form deep bonds with our surroundings, and to inform how we care for our environment.

This installation taps into indigenous knowledge and offers a conceptual shift—from humans as controllers of their environment to participants embedded in an interconnected system. It moves beyond environmental activism as we commonly see it in urban design and directly confronts the socio-political roots of environmental exploitation, emphasizing that stewardship is not just about protecting wilderness but also about fostering responsible relationships with urban ecosystems. *Standing Wave* challenges the binary thinking that separates the natural from the urban; the experience merges these environments and fosters a sense of place that includes, rather than excludes, the urban setting.



Figure 10. solar-modulated sonic module (prototype)

7. ENVIRONMENTAL LISTENING & COMMUNITY ENGAGEMENT

With the growing frequency of summer heatwaves and the escalating destruction caused by drought-induced wildfires, the realities of climate change have become inescapable. It is crucial to recognize our place and role in the health of our surroundings. Environmental listening is a potent strategy to become more grounded and fully present in the environment we call home, and to appreciate its richness, diversity, and resilience [8].

This simple shift in listening transforms how we perceive, relate to and interact with our surroundings. In doing so, we can become more conscious of how we impact the urban spaces that we live in, and this awareness can lead us to seek new solutions to respond to environmental challenges like climate change and urban heat.

Environmental listening invites us to pause and focus on the sounds of our city. The hum of traffic, the rustle of winds, or the calls of birds that have adapted to urban life—create a distinct signature (a sonic niche) that reflects the idiosyncratic ecosystem of an urban landscape. By tuning in, we gain insight into how the environment is changing over time and what these changes signal about our city's health. It is a mindfulness practice akin to meditation. Developed by renowned acoustic ecologist, Garth Paine, the practice of environmental listening follows a systematic protocol of transitioning between three listening "modes": 1) Passive Listening, 2) Directed Listening, and 3) Active Listening. While this activity can be practiced in solitude, it is most profound when observations are shared with others in a group.

Practicing environmental listening in an urban setting allows us to become more grounded in and aware of our surroundings. It encourages us to connect deeply with the ecosystem we live in. Whether in a natural, rural, or urban environment, every place has a unique sonic identity that tells a story of life, adaptation, and community.

As part of *Standing Wave's* broader vision, the installation extends beyond the physical site through direct community engagement. The author recognizes the importance of fostering environmental kinship among younger audiences, that stewardship must be passed on through future generations. Four high schools near the installation site were contacted to offer a free environmental listening workshop. The initial intent was to engage earth science and music-related classes, however, an in-class session that runs approximately one-hour would take up precious instruction time. Afterschool clubs were also considered, but the post-school day energy of students and permissibility of distractions would hinder the sustained attention that is required. Finally, the author proposed engaging the in-school suspension program, where students in detention were not allowed to use cellphones and were a captive audience, so to speak.

Research already exist that describes how meditation and mindfulness interventions can help students who find themselves in the heightened states that often lead to detention [9]. Whereas other traditional forms of meditation focus on breathwork, environmental listening is similar to the 5-4-3-2-1 technique for coping with anxiety, which uses environmental cues to diffuse stress and calm heightened states [10]. Framed as a coping strategy for students, the assistant principal at Phoenix Union Central High School happily agreed to an environmental listening workshop for the in-school suspension program. These sessions will begin early-May to coincide with the opening celebration of *Standing Wave* (to which all of the school was invited to attend). If the response is positive, the author will look to facilitate environmental listening workshops for teachers who may then easily integrate into lessons and pass it along to their students.

Engaging high school students in environmental listening is vital, as they are the next generation of decision-makers and community leaders. At this pivotal stage in their lives, they are beginning to define their values and roles in society. Environmental listening empowers them to connect personally with their surroundings and understand the real-world impacts of climate change.

High school students offer fresh perspectives and a strong desire to make a difference. By tuning into their urban environment, they develop a sense of responsibility and agency, seeing themselves as active participants in shaping the future. This practice nurtures mindfulness and environmental awareness, preparing them to advocate for sustainable practices within their communities.

Involving young people is an investment in long-term environmental stewardship. As they become more aware of urban climate challenges, their perspectives can create a ripple effect, inspiring positive action in others. Their voices are critical to ensuring urban resilience in the face of climate change, contributing to more sustainable and livable cities.

8. CONCLUSIONS

Site-specific sound installations function as both aesthetic experiences and tools for environmental engagement. By framing sound installations as agential cuts through Karen Barad's concept of entanglement, these works reshape urban relationships and foster deeper awareness of acoustic ecologies.

Drawing on Urban Acupuncture, these interventions act as strategic sonic disruptions that revitalize neglected urban spaces. Solarpunk principles inform their speculative dimension, envisioning sustainable futures where technology and ecological awareness intersect. Installations such as *A Path Unfolding*, *Hyperwilding*, and *Standing Wave* operate as acupuncture points within the urban environment, encouraging long-term perceptual shifts through listening.

Environmental Listening workshops targeting high school students further emphasize participatory engagement, and equip the next wave of policymakers with tools to critically engage their surroundings. By fostering ecological consciousness, these practices empower future generations to shape sustainable urban futures.

9. ETHICS STATEMENT

The environmental listening workshops are conducted with support from local school administrators and does not involve data collection or human subjects research. Participation by high school students is voluntary and non-evaluative, with activities framed as mindfulness and environmental awareness exercises. No recordings or personal information is gathered. As such, IRB approval is not required under Arizona State University guidelines. All interactions are guided by principles of care, respect, and accessibility.

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