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Acoustic Spatiality

Experiences of listening can be appreciated as intensely relational, bringing us into contact with surrounding events, bodies and things. Given that sound propagates and expands outwardly, as a set of oscillations from a particular source, listening carries with it a sensual intensity, whereby auditory phenomena deliver intrusive and disruptive as well as soothing and assuring experiences. The physicality characteristic of sound suggests a deeply impressionistic, locational "knowledge structure" – that is, the ways in which listening affords processes of exchange, of being in the world, and from which we extend ourselves. Sound, as physical energy reflecting and absorbing into the materiality around us, and even one's self, provides a rich platform for understanding place and emplacement. Sound is always already a trace of location.

Such features of auditory experience give suggestion for what I may call an acoustical paradigm – how sound sets in motion not only the material world but also the flows of the imagination, lending to forces of signification and social structure, and figuring us in relation to each other. The relationality of sound brings us into a steady web of interferences, each of which announces the promise or problematic of being somewhere.

I’m interested in exploring the particulars of this acoustical paradigm and specifically how it articulates temporal and spatial geographies – to follow sound as it imparts meaningful exchanges for and against the singular body, and further, to explore how it locates such a body within a greater weave. From my perspective, sound operates as an emergent community, stitching together bodies that do not necessarily search for each other, and forcing them into proximity, for a moment, or longer. Such movements bring forward a spatiality that is coherent and inhabitable, that opens up spaces for sharing, as well as being immediately divergent and diffuse, that is, temporal and multiple, noisy. Acoustic spatiality in other words forces negotiation by being constituted with the feverish energies of so many interruptions.

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I suggest that acoustic spatiality locates us within a particularly temporal flux of perspectives. The circularity, the vibratory and the resonant for instance all begin to suggest a spatiality that is oppositional or in supplement to the sightlines of the ocular; that is, as an addition to looking, wrapping our locational view in various atmospheric pressures, reflections, absorptions – stirrings.

All these sonic movements must be taken as indicating a unique paradigmatic structure or frame, lending to recognizing sound as an epistemic matrix that generates specific spatial coordinates, social mixes, bodily perceptions. It is my understanding that sound acts as a hinge by bringing into contact contradictory or divergent forces, spaces, bodies or materials. As an example, the performativity of the voice may begin to highlight this unique ontology of sound. As a special kind of sound, the voice can he heard to give fundamentally presence to an individual body, figuring as an identifiable sound of personhood, while at the very same instant, it leaves the body behind, separating from its origin to ultimately circulate outside the self, away from the body. The voice is always already mine and not mine; it animates the body, it comes from inside, while pushing outward, to navigate and carve out relations: to occupy space as a sonorous intensity, as a potentiality.

The voice embodies the contradictory, or what I'd propose as the "non-dualistic" condition of sound in general: the voice hinges together self and surrounding in a seeming paradox – I am in the world only at the moment my voice travels away me.

Sound also generally functions in this way, linking together seemingly incongruous, dichotomous or binary elements or operations, and creating spaces that easily connect inside and outside, that are concrete and ephemeral; it delivers the world in all its harsh materiality, as animate pressures and movements of intensity against the body, while already disappearing into the ether, as energy that in turn supports our feelings for place and for each other.

It is my interest to further detail sound's particular spatial behavior, and how acoustic spatiality opens up for unique forms of inhabitation, of gathering. I would argue that acoustic spatiality provides special conditions of dwelling by unfixing conventional notions of "the public". Subsequently, sound lends to an experimental discourse on what it means to be together, explicitly

introducing an associative knowledge structure that promotes radical sociality – a dwelling in difference.

Movements

Sound moves between inside and outside; it animates objects, stirs emotion; it disturbs what may appear static, while also affording moments of proximity and deep connection. It flows through the environment as temporal material, lending dramatically to the experiences we have of being in particular places, and with particular people. Sound gives to location a force of contingency, ephemerality; it envelopes all that we see with an unsteady propagation, as a continual coming forward and receding. It is the near and the far, in perennial oscillation; the under and the above, as an interweave of perspectives. It latches together concrete reality with all the murmurings of the unconscious – an animate ghosting of the material plane.

From such sonorous understanding, it is evident that sound's relation to space is extremely pertinent to a study of spatiality in general. As we know, the acoustical interplay between sound and its architectural partner delivers an important inflection to experiences of hearing. The character of a given sound is radically connected and linked to its acoustical envelope, to the space in which such a sound takes place. The particular materiality of a room for instance lends dramatically to contouring what we hear, its shape, its dynamics, and its forcefulness – its voice, through movements of reflection. This can be extended to the built environment in general, underscoring the soundscape as the meeting or incorporation of sound by its surroundings.

Subsequently, it's important to emphasize how space is integrated into the primary conditions of sound. As a movement that extends away from itself, sound produces a certain reciprocity with space; the two are interlocked, whereby sound is only itself by separating from a particular source, to appear out there: literally, to spatialize.[1]

Following such thinking, sound can be understood to readily support notions of "event-architecture". Bernard Tschumi elaborates on this event of architecture through the theme of "violence" stating: "Bodies carve all sorts of new and unexpected spaces, through fluid or erratic motions. Architecture, then, is only an organism engaged in constant intercourse with users, whose

bodies rush against the carefully established rules of architectural thought.[2] The movements of the body intrude upon architecture, lining space with a fluctuating presence, durations and inhabitations that cut into formal design. Yet in turn architecture presupposes participation, organizing itself around the anticipated presence of the user, the inhabitant. The usages and behaviors of bodies in a space literally impress upon the built, filling volume with their liveliness to deliver the intrusiveness inherent to finding place.

Such may also be said of sound. Sound also unfolds in time, as an "event-body" lending dynamic input onto the contours of the built. It may break the seams of space, and overwhelm particular borders, while also opening up sudden vistas, channels, or connections. Static form, the division of interior and exterior, and the logics of spatial design gain degrees of flexible nuance or potential rupture through the dynamic range of sound events. More than the performative moment, of a body moving through space, acoustic spatiality is an event-architecture that bypasses or displaces the centrality of the human subject, integrating instead an entire range of (non-human) bodies, material presences, energy forces and animations equally wed to the built environment and architectural form. The event-architecture of acoustic spatiality is a networked, hinging process of continual differentiation.

We might be tempted to think of sound solely as an addition to architecture, lending a particular openness, or flexibility to its forms. A sort of continual supplement to the hard edges of the built. While sound moves in and around architecture, as an ambient perfuming, it is also my view that sound is always already space itself: that first and foremost a sound is the direct corresponding figure to the place of its occurrence; it is not only a subsequent after-effect, a conditioning flow. Instead, what we hear is automatically an acoustical voice. From such a perspective, acoustic spatiality is an architecture into which our listening directs us. It is a form of dwelling within which particular experiences occur, particular routes toward each other unfold, and from which views onto the world are revealed. Within this architecture, this event-space, a nuanced, mutable materiality can be found by which to form, moment by moment, connections and relations.

From this understanding I'd like to draw out a number of perspectives so as to elaborate the relation between sound and space, and to further detail the features of acoustic spatiality. One would be that acoustic spatiality is a blending or mesh of the material and the immaterial. The

reciprocity between sound and its spatial envelope can be heard to couple together the material conditions of the built, its concrete properties, with the oscillations of sound. Sound is in this sense the result of a spatial relation; it requires the resonating or vibratory sympathy of a surrounding – or, might sound be heard to search for contact, to seek out sympathetic echoing, to demand it be heard? This performative interplay passing between sound and space begins to suggest less a dichotomous relation, and more an interweave where sound and space are coupled, tuned to each other, as an exchange of energy. Sounds impact onto the materiality of the built expends energy onto its forms while gaining momentum, reflection, from architecture's volumes. Subsequently, acoustic spatiality is constituted both by the material and the immaterial.

A second perspective would be that acoustic spatiality displaces our traditional view of a fixed border between inside and outside. Given sound's vitality, its propagating verve, it readily puts into play a less clear distinction between rooms, and between buildings, between the distinctness of separate spaces. Instead, we can understand acoustic spatiality as "zones of intensity", that is, as timbral identity by which differences are brought into play. What is inside then, as an architectural space, is less defined by sightlines or by the appearance of walls. Rather, sound ripples through space to easily occupy multiple areas, immediately bridging one space with another, and often leaking over lines between in and out, back to front, below from above.

Following this perspective, I would also suggest that this zoned spatiality of sound often shifts the borders of the private and the public. If we can appreciate acoustic spatiality as an interweave, a material and immaterial coupling, I would add to this equation the private and the public, where what is held to be private and what appears to be more public interpenetrate, producing a less fixed distinction. I would extend this toward a proposition: that from such acoustic spatiality a new modality of "community" is put into play. Acoustic spatiality instantiates the making of a new crowd: a plurality whose identity is constituted by a process of radical movement that disregards the marks of the skin, the arrested force of the image, the sign systems of the ideological apparatus. The politics of acoustic spatiality are dramatically informed by the restless, associative and hinging procedures of the ear.

It is clear from this that as a third point acoustic spatiality dramatically integrates temporality into its movements. The flux, the propagations, and the fevers of sound impart meaningful differentiation

to architecture's more static forms. As I've tried to suggest, the sound-spatial coupling is an event-architecture precisely by coming to life here and there, as so many oscillations between multiple points of contact, exchange and interaction, to promulgate a zoned spatiality. The temporality of this event lends a powerful uneasiness to space, literally displacing the apparent fixity that surrounds us with what Mladen Dolar claims as sound's uncanny disposition.[3] Sound continually shifts the lines of perspective, of distances, animating the materiality of the built and sensitizing us to processes of movement, and the potentiality for rupture as well as sudden connection. As Juhani Pallasmaa proposes, sound gives to architecture a sense of lived time, a temporal registration of movements and exchanges, sharing and experiences of place.[4]

I'd suggest that acoustic spatiality is precisely this interweave of sound and space – it is neither found by looking toward a given room, or by listening to any single sound, as somehow unique or distinct. Rather, acoustic spatiality is both, together. It is a spatiality prompted by the behavior of a given sound, and which already contours this sound, as if in anticipation. Acoustic spatiality is thus what Brian Massumi calls a "virtual becoming".[5] As the continual interweave of the material and immaterial, shifting across borders and boundaries, along a trajectory of temporality, acoustic spatiality takes on presence, in an instant of listening, while already suggesting something to come. It occupies this liminal territory partial to the imagination, and the ambiguities inherent to sound. The virtual becoming of this sonority, as an event-architecture, creates an energetic space onto which memories attach, and future reverberations already unfurl.

Energy

To explore this further, I'd like to extend these behaviors of acoustic spatiality. This will entail shifting from an understanding of sound as air-borne waves and toward the more structure-borne. That is, toward energy and vibration.

“If a work of architecture speaks only of contemporary trends and sophisticated visions without triggering vibrations in its place, this work is not anchored in its site, and I miss the specific gravity of the ground it stands on.”[6] As Peter Zumthor suggests, experiences of architecture are often charged by the flows of energy and atmospheric texture, contributing meaningful force to the hard

edges of space. Feelings for a place in other words impart great influence onto our sense of being located. Jean-Paul Thibaud elaborates on these sensorial dimensions of space, suggesting that the “ambience” of place functions as an energetic flux bringing forward the temporal and situational details of spatiality. “To put it in a few words, an ambience can be defined as a time-space qualified from a sensory point of view. It relates to the sensing and feeling of a place. Each ambience involves a specific mood expressed in the material presence of things and embodied in the way of being of city dwellers. Thus, ambience is both subjective and objective: it involves the lived experience of people as well as the built environment of the place.[7] In this regard, elements of light, sound, smell, and texture, along with weather, social energy, and the fluctuations of mood, significantly add dynamic presence to the concrete structures of space, and for Thibaud, the experiences of urban life.

Luis Fernández-Galiano further provides an extremely rich examination of architecture through the lens of “energy.” As he proposes, "Architecture can be understood as a material organization that regulates and brings order to energy flows; and, simultaneously and inseparably, as an energetic organization that stabilizes and maintains material forms.[8] Fernández-Galiano reveals a deep memory to architecture found within the warmth of the home, and the first fires at the center of space, highlighting the developments of thermodynamics as a scientific model that draws an altogether different sense for what constitutes space. Architecture, as the stabilization of energy, fully integrates aspects of expenditure and entropy into its forms; rather than fixed or inert materiality, architecture is full of force. From thermodynamic expenditure to the material transubstantiation occurring in construction itself, aspects of energy are fully embedded within built form.

From Fernández-Galiano’s analysis questions of the ambient, or what is generally located undercover, alongside, in the background, or within the passing of time, take on vital presence within architecture to impart a suggestive link between architectural forms and animate life. This is furthered in the work of architect Kisho Kurokawa, and his theories of Metabolist architecture. For Kurokawa the separations of inside and outside often promoted by architecture create too sharp a distinction and undermine the greater “metabolism” at the core of spatial design. In contrast, his

work seeks to insert what he calls “intermediary” spaces “unobstructed by any dualistic division between inside and outside, a space free from the divisions of walls.[9]

The energetic and metabolistic models of architecture come to recognize the built as a gathering of forces into momentary stability; even our own bodies, in their exertions, heat fields, and performances can be situated within the flows of energy surrounding and defining buildings. A field of pressures bending, sculpting and impressing upon built form, in the flows and waves of time itself.

Such a model complements much of what I've been mapping here, whereby sound lends to the dramatic interweave of the material and the immaterial, across spatial divisions to appear as spatiality itself.

I'd like to extend these ideas beyond sound as the oscillation of air particles, and toward sound as structure-borne energy. In other words, sound in the form of vibrations passing through walls and floors, as well as bodies. Vibration extends our listening experiences to that of felt energy, that is, a tactile sound that we sense more than hear. Vibration, as an expenditure of energy, passes through materials. In doing so, it radically draws connections between things and bodies, objects and their energetic stabilizations. As Shelley Trower states, "Vibration, not itself a thing or matter, can move simultaneously through subjects as well as objects, bridging internal and external worlds."[10] It thus elaborates a perspective onto acoustic spatiality that readily disappears into space, into architecture, to redraw understandings of built form through more extreme connections. Vibration reveals a spatial contour that overrides the visual geometry of architecture, instead forming space as linkages and connections that often pass through walls and floors, under the feet and at times may also overwhelm the listener.

The field recording work of the artist Toshiya Tsunoda captures such linkages, and renders an evocative sonic picture of existing environments. The audio works from his Solid Vibration CD (1999) highlight how vibration phenomena not only extend the listening ear to that of tactility, to a feeling body, but also how materials such as concrete, asphalt, fencing, doors and other solid forms are sensitive resonating objects. For example, track 8 is the recording of a scrap of iron located in the industrial yards of Yokohama port in Japan (where all of the works on the CD were

recorded). Using small transducers placed directly onto the iron object, the recording captures vibrations occurring from a number of distant sources, such as vessels anchored on the outskirts of the bay, and is heard as a stable humming sound.

Throughout the work Tsunoda seeks to record the environment of the port by focusing exclusively on vibrations, revealing direct relations between an object in one part of the bay and another at a distance, where the one produces a set of sound frequencies while the other resonates in response, marking the environment as an elaborate, corresponding field of relations. By tuning into the vibratory linkages surrounding a given environment, the artist gives us not only an entry point into a sonic underworld, but a spatial theory that may supplement notions of event-architecture. According to vibratory phenomena, buildings and environments are tuned and detuned by the material interactions, energetic frictions, mechanics and general movements of immediate surroundings that at times far exceed our expectations. And which radically disrupts any worldview that places the human subject at the center. By recognizing the eventness of the built environment as a set of energetic, metabolistic phenomena, our sense of place is immediately not our own, nor defined solely by what we do. Rather, material culture and the life of objects act as forces dynamically effecting and shaping the world around us.

Jane Bennett in her thoughtful and provocative account of "vibrant matter" and related theories of "life force" as heterogeneous assemblages, underscores the relationships "between persons and other materialities" in this horizontal fashion. From such a view, Bennett ultimately charts out a more "vital" ethical and political dimension by which self and surrounding, objects and their communicative and effective vibrancy exchange, align, and grate against each other![11] This horizontal, distributive view readily finds expression when following vibration – as the very energetic movements that exist not as object or body, but as a passing between.

Ghosting

Messages, forces, voices, events and related durations continually ripple through the environment, drawing and redrawing spatialities that open up built forms as energies captured, held and located – but also, always already prone to movement. The stabilization of material form Fernández-Galiano speaks of includes the very promise of collapse, entropy, rupture. In fact, architecture, as

energy held, a motion captured into particular form, is always already in slow decay: the weathering of building facades, the minute fading of interiors, the slow impingement of dust and dirt, all come to interfere while giving expression to the very force embedded in architecture. Spatiality is thus a continual movement; it is in fact always already an event in which our bodies participate.

With the emergence of digital technologies, contemporary architecture comes to amplify the inherent eventness of space. An interesting example can be found in the recent concert hall in Copenhagen designed by Jean Nouvel. Opened in 2009, the concert hall (containing the studios of Danish Radio) features a blue, transluscent sheath wrapping the cubic building. This translucent covering veils the interior life of the building as it takes place behind the main glass exterior, while also serving as a projection surface at night, often featuring live images from concerts as well as recorded montages of past concert scenes. In this way, the building expresses a sort of virtual porosity, physically confusing interior and exterior, real and mediated, and blending the movements of occupants with that of recorded imagery. The building in a sense starts to relate to the reality of its energetic features, taking into consideration the materiality found within our contemporary network culture, as one built with live streaming, internet interactions, mobile devices and social utility websites. Such contemporary conditions dramatically unfix spatiality with a great degree of mobility – an energetic, vitalist perspective inserted into our spatial environments.

Spatiality is thus haunted by movements that always already suggest dynamic mutability, a mutational force hovering in the ether, as electromagnetic waves, as wireless signals, satellite imaging, an entire range of surveying and monitoring devices that beam here and there a plethora of renderings. From this perspective, the poetics of shadows outlined by Tanizaki must be seen to include the digital shades of communicational energies. The metabolist, intermediary spaces Kurokawa seeks are found in the connective links now embedded within the environment, whereby internet connections open up great in between spaces full of the passing of so many voices, shadowy bodies, ghostly presence. The vibrancy of objects and things mapped by Bennett are dynamically expressed in this contemporary spatiality: we fully inhabit these shadowy, energetic territories, constructing as a daily practice our own event-architecture.

Inhabitation

Is it possible to think of acoustic spatiality as a place for inhabitation? An actual shelter that provides comfort or a place for meeting? Might we think of sound as a "soft architecture" whose eventness modulates the edges of the built? To produce form and volume? Sounds of traffic, the footsteps of passers-by, the turning of pages of a book, all such sonorities appear to open up the material conditions around us, to expand and contract the architectural.

In Steen Eiler Rasmussen's Experiencing Architecture, the author draws upon musical composition as a metaphor for appreciating architecture, underscoring the communicative dynamic of the built environment.[12] For Rasmussen, buildings signify precisely through aspects of rhythm, harmony and particular formal orchestrations. Through considering the interplay between sound and space, it is my interest to extend Rasmussen's view, to register the dynamics of the acoustical as not only a metaphoric device, as aesthetics, but also as spaces of inhabitation.

Acoustic spatiality opens up and closes down, each instant of sound creating a dynamic passage between a source and a listener: in hearing I am immediately occupying the particular spatiality of this event. The energetic weave of sound and space integrates myself within its continual occurrence, as a situated figure moving through and around this soft architecture. In this way, I am continually brought into contact – with the seagulls whose distant calls enter into my room to interweave with my voice, or the footsteps from outside the door introducing into my room the echoes of an unseen body. Thus as a listening subject I am already immediately enmeshed within a greater network of animate forces whose spatializing effects elaborate a form of place always already multiple, temporal, and contoured by others.

What I'm after then is both to expound a general theory of sound as well as to articulate listening as a fundamental spatial event whose operations give radical suggestion for relating to where we are. I take acoustic spatiality as always already the beginning of a new crowd, where new meetings are constantly formed, new conversations are continually generated, and a sense for how we might share in this architecture are endlessly suggested. For sound readily grants a sense of duration through the unfolding of verbal conversations, the fluid and feverish passing of auditory events and

messages, and the general flux of background noise that creates an organic sheath to the flow of experience. What sound may come to support, through a radical flexibility, are modes of building that remain in tune with the often ambiguous yet concrete material and immaterial exchanges taking place in everyday life. From this perspective, acoustic spatiality may suggest new structures within the built environment specifically for locating points of contact or zones of sociality within the hyper-movements of contemporary life that also fully situate us amidst animals, objects, signals, natures: that is, a global ecology.

If sound, as I'm pursuing, creates a soft architecture, hinging together material and immaterial matter, as a place to dwell, it does so by also creating a stage or scene for the unnamable and the nameable to meet. If, as I suggest, sound operates as a particular paradigmatic structure, to form an enveloping dynamic onto how we perceive and interact, it does so by creating an active channel by which strangers meet – sound forces bodies and things into temporary contact, to hinge together a community in the making. To hear is to immediately come into relation.

Sound's ability to move in and out of focus, flowing as raw material and then, at points, cohering into meaningful exchange, lends to our sense for being in a certain place, at a certain time. Yet it does so by integrating into the field of listening what is beyond or removed from our selves. In other words, sound, as that which crosses over, which forces into proximity one and the other, brings into contact the represented with the non-represented – with what has a name and what is yet to be named. Through its ability to disrupt or unsettle the lines between inside and outside, between one skin and another's, sound pulls into its movement the private and the public. It brings us together without necessarily cohering into any traditional form of community – it affords instances of collectivity that automatically includes something or someone beyond the perimeters of a given identity; a sound is never truly one's own, nor does it settle within any fixed boundary or shape. It is an architecture onto which many claims are continually made. In this way, I take sound as the very means by which we learn to negotiate the challenges of presence and absence, of the real and the virtual, to ultimately remake or reconfigure difference and commonality – of what is mine and what is yours.

[1] question of interior sound; self-hearing.

[2] Bernard Tschumi, Architecture and Disjunction (Cambridge MA: MIT Press, 1996), p. 123.

[3] Mladen Dolar, "The Phonetic Burrow", in Parole #2: The Phonetic Skin (Cologne: Salon Verlag, 2012).

[4] See Juhani Pallasmaa, The Eyes of the Skin: Architecture and the Senses (Chichester: Wiley, 2007).

[5] See Brian Massumi, Parables of the Virtual: Movement, Affect, Sensation (Durham, NC: Duke University Press, 2002).

[6] Peter Zumthor, Thinking Architecture (Basel: Birkhäuser,1998), p. 37.

[7] Jean-Paul Thibaud, “The three dynamics of urban ambiances” in Site of Sound: of architecture and the ear, Vol. II, eds. Brandon LaBelle and Claudia Martinho (Berlin/Los Angeles: Errant Bodies Press, 20012).

[8] Luis Fernández-Galiano, Fire and Memory: On Architecture and Energy (Cambridge, MA: MIT Press, 2000), p. 5.

[9] Kisho Kurokawa, The Philosophy of Symbiosis (London: Academy Editions, 1994), p. 156.

[10] Shelley Trower, Senses of Vibration: A History of the Pleasure and Pain of Sound (New York: Continuum Books, 2012), pp. 8-9.

[11] Jane Bennett, Vibrant Matter: a political ecology of things (Durham, NC: Duke University Press, 2010), p. 10.

[12] Steen Eiler Rasmussen, Experiencing Architecture (Cambridge, MA: MIT Press, 1962).

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