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Beyond the Network: Urban Media Ecologies and Experiential Fields

BEYOND THE NETWORK: EXPERIENTIAL FIELDS AND URBAN MEDIA ECOLOGIES

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Abstract

The growing proliferation of urban interactive technologies into our everyday lives demands a move from an initial fascination for the technologies in themselves to their actual experiential impact and how they '...affect the ways in which we use and understand walls, windows, doors, sidewalks, streets, intersections, parks, markets, and playgrounds.' (Greenfield and Shepard, 2007). Increasingly, this cannot be done by focusing on singular devices, subjects or places. One way of approaching this heterogeneous plurality of elements has been prominent in the diverse analysis of networks. The problem, however, is the continued conception of entities or nodes as foundational building blocks of such networks and how they are connected or experienced.

In a recent resurgence of William James' radical empiricism Adrian Mackenzie proposes an approach toward wireless technologies not as merely facilitating networked experiences of a particular kind but as constitutive of relational practices blurring boundaries between confined entities such as architecture, human bodies or technological devices. According to Mackenzie, wirelessness '... designates an experience trending toward entanglements with things, objects, gadgets, infrastructures, and services, and imbued with indistinct sensations and practices of network-associated change" (2010, 5). These entanglements are in particular evident when dealing with e.g. media architecture or mobile technologies in urban or public space.

While building on the conceptual outline of wirelessness foregrounding experience, we propose the concept of experiential fields emphasizing the emergent and affective quality of experience. Experiential fields address experience as an ecological and relational process, focusing on the conditions of emergence of urban interactive environments. We are concerned with ways of facilitating experiential situations pointing at urban media-ecological processes and investigating how to work with them creatively beyond confined spaces, bodies or technologies.

Through an analysis of two urban interactive installations, Frequency and Volume (2003) and Ekkomaten (2012), we bring to the fore a range of challenges and questions concerned with accounting for the workings of media ecologies and experiential fields. Both works deal with sound activating and activated through its urban context. Frequency and Volume by Rafael Lozano-Hemmer is an interactive art installation amplifying radio frequencies through bodily engagement

with the exhibition space, foregrounding awareness for electromagnetic fields. Ekkomaten is a gigantic listening machine that lets people explore echoes from the past tied to a particular site in the city through their interaction with it. Either work constitutes a media ecology activating an experiential field which modulates the potential for action in the city through an affectively engaging mobilization of emergent forces.

Investigating relations between media and the urban along the constitutive lines of experiential fields allows us to reconsider what we usually separate into discrete entities such as the body, the urban or the political. Shifting the focus on media in urban contexts from an infrastructural or informational discourse toward urban media ecologies as processes of immediation opens new potentials for considering mediatic encounters and the situations they facilitate in experiential terms beyond the network.

1 Introduction

The growing proliferation of urban interactive technologies into our everyday lives demands a move from an initial fascination for the technologies in themselves to their actual experiential impact and how they "...affect the ways in which we use and understand walls, windows, doors, sidewalks, streets, intersections, parks, markets, and playgrounds." (Greenfield/Shepard, 2007). Increasingly, this cannot be done by focusing on singular devices, subjects or places. One way of approaching this heterogeneous plurality of elements has been prominent in the diverse analysis of human and nonhuman actors in networks (Latour 1987, 1993; Castells 1996, 2009; Chun 2006, 2011; Terranova 2004, Shaviro 2003, Murphie/Potts 2003, Munster forthcoming, Corby 2006). In his recent book *Wirelessness*, Adrian Mackenzie presents a critique of a network-centric analysis of the relational complexity and experiential impact of the distribution of wireless technologies based on a reading of William James' *Radical Empiricism*. For Mackenzie, wirelessness designates "... an experience trending toward entanglements with things, objects, gadgets, infrastructures, and services, and imbued with indistinct sensations and practices of network-associated change" (2010, 5). Mackenzie explicitly positions his undertaking in contrast to network theories' focus on relations as connections:

"After a decade of heavily network-centric social, cultural, organizational, and mathematical network theory, there are reasons to begin to approach networks a little more diffidently. While it exhorts attention to relations, network theorizing can deanimate relations in favor of a purified form of networked stasis" (Mackenzie 2010, 9).

However, even though wirelessness as a concept opens up a different analytical path for making sense of the dynamics of increasingly interactive environments, the network still remains the dominant frame of reference for relationality in the book. With the term fields of experience, we attempt to follow the path opened by Mackenzie towards an actual conceptualization of the experiential changes and sense modulations effectuated by – among other things – new wireless infrastructures in urban media ecologies. In doing so, we wish to continue a shift away from an entity-based logic of networks where things, objects, or even movements are interrelated and often reduced to fixable substances (Brunner/Fritsch 2011). For James, experience provides the ground for emergence without presuming a substantially fixed world to be encountered or an already constituted subject encountering. He calls pure experience an experience where thought and thing have not yet bifurcated but share the same emergent milieu (James 1996, 74). Pure in this sense is not an essentialist concept but a tensed field or system to use Gilbert Simondon's vocabulary (Simondon 2005). In his writings, James describes pure

experience as an 'instant field of the present' (1996, 23). Here, our attentiveness to the field character of experience points to this double-process; that of pre-expressive structuration and the actual passing of emergence. Neither of them, as we will show, is sufficiently represented by a network-thinking that takes relations as either supportive or generative of structure without accounting for their movement and tendency. What comes to pass in an experience never entirely detaches from its experiential field nor does it exhaust the field's potential.

Another way of addressing this double process is through conjunctive and disjunctive relations in James' terminology. In relation to wireless technologies, Mackenzie particularly emphasizes conjunctive relations as facilitating a sense of (pure) experience through transitions (2010, 51-53). Conjunctive relations are relations making change, the vital power of existence, being felt. For us Mackenzie's rather one-sided embrace of conjunctive relations is problematic and requires further investigation of relations being as real as the terms related. We want to get even closer to relations, asking what a "relation-specific" approach can do in resonance with interactive media environments (McCormack 2010). While conjunctive relations provide a sensation and flow of transition to be felt, we find it important to underline that their coming together happens disjunctively. In fact, James provides a thinking of relations as singular series in their tendency toward potential conjunction, a concept also crucial for Gilles Deleuze (Deleuze 1994). Accordingly, conjunctions are not mere connecting devices or pure flow (James 1996, 51-52). On the contrary, while conjunctive relations focus on the emergence of experience, disjunctive relations point at a relation's singularity as a movement or virtual – that is, not actualized – tendency.

Here, we follow this double movement by problematizing the interplay of conjunctive and disjunctive relations through a thinking of experiential fields. On the one hand we wish to unfold the operational character of relations in actual experimental situations. On the other hand we attempt to follow James in entering the more virtual tendencies of such experiential situations as actively operating and tensed fields. Such fields are creatively contributing to the passing of experience. Investigating how they pass, leads us to investigate contemporary media as technologies for emergence. Beyond a mere technical boundedness such technologies of emergent experience (Massumi 2002, p. 192) underline contemporary media as ecologies rather than networks and focus on the force of immediation rather than a connective logic of mediation.

2 Urban Media Ecologies and the Movement of Series

In 2003, artist Rafael Lozano-Hemmer staged an interactive artwork involving radio frequencies, movement tracking, visitors and their bodies moving in space. Frequency and Volume is part of Lozano-Hemmer's relational architectures series. Projecting the silhouettes of their bodies being tracked by the system onto a white wall in a gallery space, participants can tune into different radio frequencies which are then transmitted and amplified into the space (Fig. 1). The system captures frequencies which are not only used by public radio but also police, ambulance, taxi and truck drivers. Once a body's shadow has been tracked, a signal is attached to it and modulates according to its movement (Fig. 2). Lozano-Hemmer describes how Frequency and Volume problematizes the struggle over access to public material and immaterial spheres. The work was developed as response to the Mexican government's restrictive administration of radio frequencies preventing indigenous pirate radios as means of empowerment and political organization.

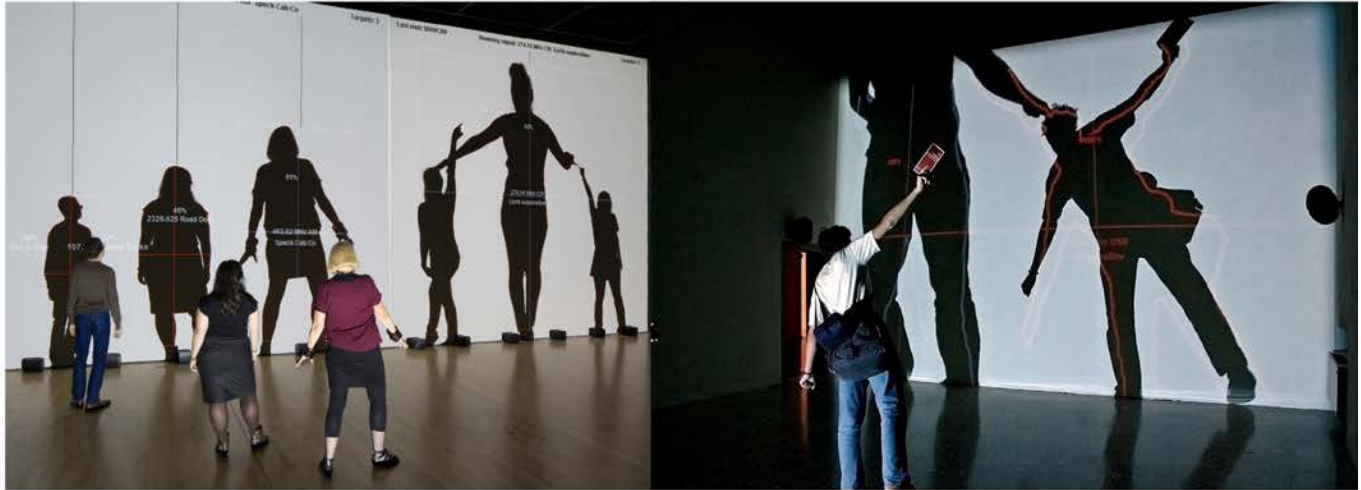


Figure 1. (Left) *Frequency and Volume, Relational Architecture 9, 2003. San Francisco Museum of Modern Art, 2012. Photo by: Johnna Arnold. From: lozano-hemmer.com.*

Figure 2. (Right) *Frequency and Volume, Relational Architecture 9, 2003. Some Things Happen More Often Than All Of The Time, Mexican Pavilion, 52 Biennale di Venezia, Venice, Italy, 2007. Photo by: Antimodular Research. From: lozano-hemmer.com.*

Bearing the idea of pirate radio in mind, one can see how Matthew Fuller's seminal treatment of pirate radio as media ecology and Anthony Dunne's development of the idea of Hertzian space come together in *Frequency and Volume* (Fuller 2005, Dunne 1999). Fuller's account of the media ecology of pirate radio is not concerned with the mere interrelation of humans, technologies and urban geography, but rather with the blurring of form and content in these ecologies (2005, 22). His use of the term ecology has been particularly influenced by the works of Gregory Bateson (1972) and Félix Guattari (2008) (see also Parikka 2011, Goddard/Parikka 2011). By exposing sound's modulatory force through frequencies and across technologies, bodies and landscapes, Fuller provides an outline of media ecologies which differs from a more rigid conception of media networks. The technological assemblage of an electromagnetic field, its amplification and the motion tracking of bodies has to be considered on its operational level, asking "what it does" (Murphie 2002, 189). As relational operators these technological devices insert themselves into the field of experience of electromagnetic potential by tweaking such potentials into actual perceptual events through the movement of bodies.

The experiential field character of such an urban media ecology enables conjunctive relations to emerge disjunctively. Each individual participant entering the art installation immediately constitutes a change of state (or phase) causing differential perceptual effects. Through the media ecological blurring of form and content, the work is less based on stimulus and response or communication, but rather provides a pre-expressive structuration and an actual passing of emergence. From this point of view *Frequency and Volume* functions as a proposition for bodies to engage with an incorporeal electromagnetic field making it corporeally felt without pre-defining what actually becomes felt (Fig. 3).

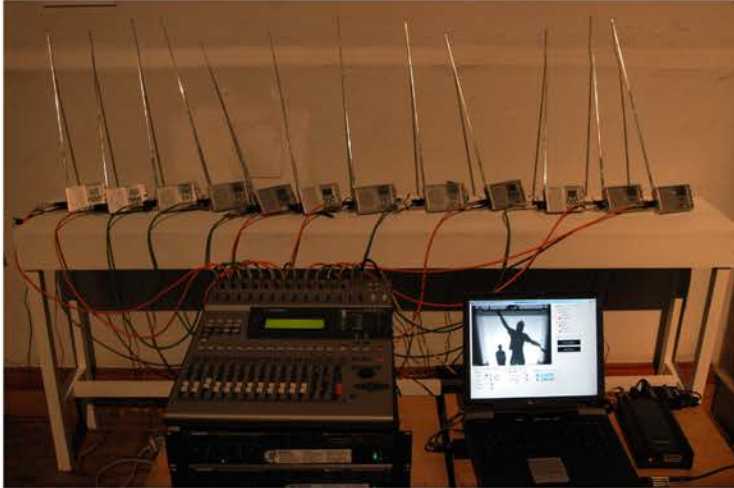


Figure 3. Frequency and Volume, Relational Architecture 9, 2003. Laboratorio Arte Alameda, México City, México. Photo by: Antimodular Research. From: lozano-hemmer.com.

The conjunctive enables this by relaying relations and their very manner of being while the disjunctive makes it palpable in the passing of experience. As soon as a frequency is attached to a silhouette on the wall it rests for a short instant and then modulates while the body is moving. This is an experimental eventuation on the flight where the ecology as much as the experiential field move and alter in resonance with the actual human body in motion. This aspect, we feel, bears a lot of potential for thinking not only the constitution of "technoecological" fields of experience but the power of the disjunctive as actualizing and perishing operation (Parisi 2009). Perishing, a term crucial for Alfred North Whitehead, is a necessary part of each process of emergence (Whitehead 1978, 29). Without the disjunctive relation and its perishing the experiential field would remain static and difference could never occur. In relation to *Frequency and Volume* the perishing can be considered as a felt impression of the actualized radio frequencies moving through bodily sensation and leaving traces as feelings, which are now part of the participant's bodily-sensorial repertoire. In urban media ecologies, neither bodies in relation to the space nor technical apparatus pre-figure their mutual coming-together, which constitutes this media ecology as field of experience. What might be considered as the technological network of the artwork actually requires an ecological dimension of movement beyond the networked structure. An ecological mode of thinking in experiential terms allows us to reconsider what this mutual coming-together actually means beyond a model of synthesis based on preset entities.

Ecologically, what comes-together mutually is the interplay of relations as tendencies for emergence acting upon each other. The field of experience and its conjunctive and disjunctive operations enable us to conceive of technologies not as entities but as technologies of emergent experience while at the same time being part of structures facilitating such emergence. The disjunctive-conjunctive thinking of experience in the making lead us to propose not only a different conceptualization of media but also a different mode of experimentation with them. Media in this sense are not just ecological operators but also in their very nature differential. Andrew Murphie writes: "Differential media ... do not ... just enhance connections but draw our attention

to difference as intensity, to movement, to sensation, to ongoing affects" (Murphie 2003, 151-152). The difference of network and ecology resides in the differential foregrounding intensity, movement, sensation and affect as excessive and incorporeal forces in experience; in other words they are the fielding of the field of experience. Emphasizing the differential processes of media in relation to shifting fields of experience leads us to conceive of any media-related event as a nexus of movements, sensations and their tendencies at the same time affectively potentializing and effectively becoming.

The co-operation of conjunctive and disjunctive fielding Brian Massumi terms the relation-of-non-relation (Massumi 2011, 20). A field is tensed but not actualized. It operates ecologically as potential differentiator while not preempting what actually comes to pass in experience. Relations' status as "real" gives them a quality of self-relation in the first place. In their bare activity they express a tendency or movement ready to act and being acted upon by other relations. In this sense a relation as processual and non-substantial could be called in reference to both James and Deleuze a series. A series' quality is the manner or style of its movement. As series, relations maintain their particular propensity while resonating with other relations to constitute experience. This is the relation-of-non-relation or in Deleuzian terms a disjunctive or heterogeneous synthesis of resonance (Deleuze 2004, 262). Series-thinking requires us to conceptualize media ecologies through experiential fields as resonance of heterogeneous series.

3 Immediation and Technologies of Emergent Experience

Following Deleuze's idea of the heterogeneous synthesis as ground for emergence through series enables us to rethink the relation between networked structures and ecologies for emergence. Andrew Murphie points out that the general critique of networks is based on a binary separating structure from emergence (2006, 123). The existence of the series and their heterogeneous synthesis forge emergence to become expressive. How the threshold for this emergence actually operates requires us to investigate the relation between relations and their immediate co-emergence. Structure and emergence feed from the same immediate field of relations, i.e. the field of experience. In other words, they share the same middle or set of relations giving birth to series of structuration and pulses of emergence. We propose immediation as a limit-concept and practice allowing for a grasping of fields of experience in the immediacy and materiality of its very operation through distributions of affective forces. The main question considers the operations at stake enabling embodied perceptual experience arising not as an act of mediation but as the composition of space-time for experimentation through perception, orchestrated by interactive means – an example of which we will develop below.



Figure 4. Ekkomaten, on display at Store Torv, Aarhus in March 2012. Photo by: Uggi Kaldan.



Figure 5. Ekkomaten and a map showing the layout of the square, with symbols for the position of each of the six echoes that people could search for. Photo by: Uggi Kaldan. Graphics by: Jette Bæk Møller.

Ekkomaten (Fig. 4) is an interactive listening machine developed at the centers for Digital Urban Living (DUL) and Participatory IT (PIT), CAVI, Aarhus University, in 2012. It functions as a physical and auditory interface to the 18th century city of Aarhus, Denmark. By interacting with Ekkomaten, people can listen to six 'echoes' from the past relating to actual buildings, locations and events at Store Torv (the Large Square), echoes that have supposedly been captured by the machine. The echoes are site-specific stories embedded in a general soundscape, and presented in a dramatized form as small radio plays. In order to explore the echoes, you need to physically turn and directly point the machine towards the sites where the stories unfold; some stories are tied to current buildings (the Church), other to buildings or sites that are no longer present at the square (e.g the City Well, see Fig. 5). This way, you gain access to the sounds of everyday life as it might have occurred in the 18th century at this particular location.

Ekkomaten is an example of an interaction design that questions conceptions of anytime-anywhere ideals of seamless interaction with ubiquitous and disappearing digital infrastructures (see e.g. Bolter/Gromala, 2004). As a machine for listening, Ekkomaten demands attention and it also demands a considerable amount of physical effort from the people wanting to interact with it. This form of tactile engagement immediately modulates the reception of the soundscape and feeds into its reception - and it does so in a number of ways. People behave very differently: some will turn the machine around and then listen without touching it, some will continuously hold onto the machine while listening attentively, sometimes people will explore the functionality of the machine without actually listening to the echoes (Fig. 6). This is just one example of how the experiential field offered by the installations plays out very differently through people's courses of interaction.

Ekkomaten aims to activate a range of sensations; the tactile/physical, the auditory, the visual, which are all activated through the experiential field, immediately and affectively engaging the people interacting with the machine. People have commented that by listening to the soundscape, images of how the place might have looked like emerged. This is a kind of immediate synesthetic functioning facilitated by the setup, not least relating to the fact that Ekkomaten is placed in the city. This might seem banal, but situating the reception of the content in the place in which the events might have taken place not only adds to the atmosphere of the reception of the content, it also very palpably activates people's ideas about how the city might have looked, smelled, and sounded in the past. Again, in a media ecological approach boundaries between form and content blur. For instance, people have started talking about the validity of the soundscape as a way of entering discussions about Aarhus in the 18th century. In other words, by experiencing the sounds of the 18th century Ekkomaten brings conjunctively different series into resonance even though their disjunctive temporal relation spans centuries.

Ekkomaten is not primarily concerned with connecting people to the past. Instead, it attempts to re-activate past events in the present through people's interaction, in a very real way 'bringing stories to life'. In many ways, this form of re-activation of past events in the present also tends towards the future use of Store Torv as a public space or the deployment of interactive technologies in an urban context. A range of people have commented on Ekkomaten as an alternative interface to- and in the city, as opposed to mobile phones, urban screens or media facades. This way, we will argue that Ekkomaten is a material manifestation of a whole range of more subtle changes of the way digital and interactive technologies and media ecologies are reconfiguring the cityscape and modulating our perception of urban space. The concept of immediation allows us to think the conjunctive-



Figure 6. Different forms of interaction and listening. Photo by: Uggi Kaldan.

disjunctive synthetic operations for constituting immediate and at the same time fielding events of experience. The way an entire urban media ecology shifts in its potential through an embodied and affectively engaging process enables us to think such technologies as technologies for emergent experience. At the same time, considerations for emergence have to be complemented with the processes of perishing and its extension of a field of experience, its virtual structuration. The main challenge is not only to make things felt in their immediate presence in experience but also to make their potential ways of causation or continuation a vital and empowering part of it.

4 Propositions for Future Experimentation

Experimenting with media allow for experimenting with the thresholds of fields of experience and their manners of actualizing. Experiential fields enable particular kinds of experimentation, not necessarily through technological or bodily constraints, but through reinforcing resonance and emphasizing conjunctive and disjunctive relations. How experience engenders a feeling of transition resonates across an entire field, regardless of its heterogeneous elements generating a new series while continuing the movement of all the other series in heterogeneous synthesis. In Frequency and Volume the moving body modulates frequencies. Their amplification and expression pass as directly felt intensities where neither technology, the body or the space could individually account for what constitutes this experiential media ecology. Ekkomaten creates the conditions of emergence for the immediate coming-together and eventful activation of a range of processes, series and relational events through the interaction and can be seen as a technology of emergent experience. Politically we are interested in experimenting with technologies of emergence through media ecological and immediating propositions. As a consequence, we conceive of writing and practicing along the lines of new media theory and interaction design as a techniques for experimentation through non-determinist and non-relativist but relational concerns of contemporary media technologies.

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