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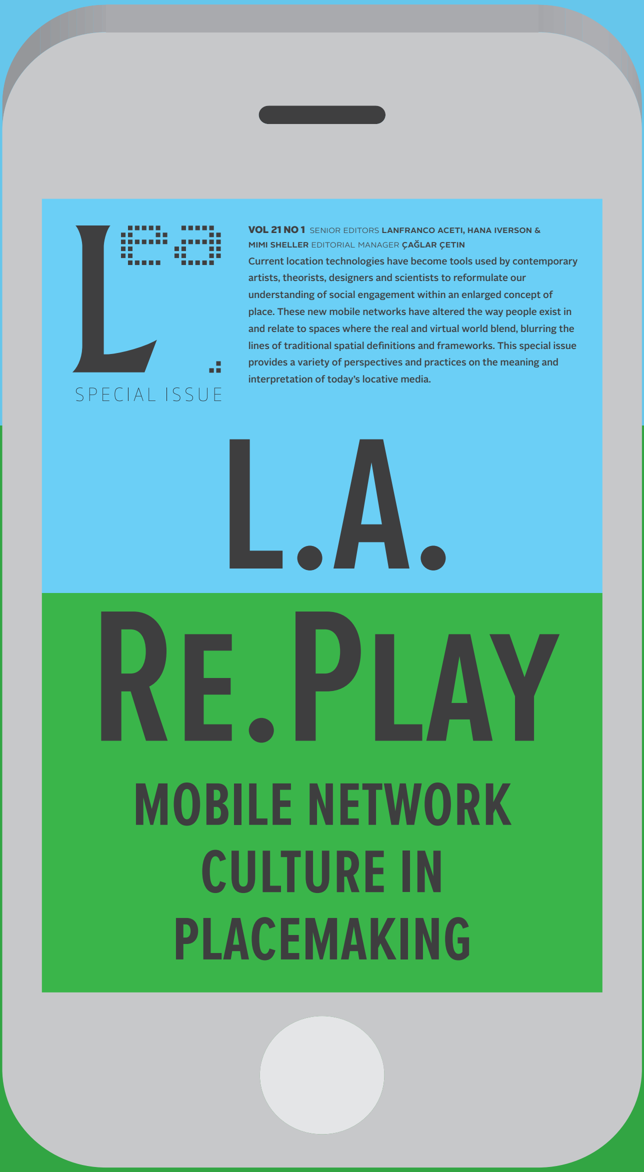
LEA

SPECIAL ISSUE

VOL 21 NO 1 SENIOR EDITORS **LANFRANCO ACETI, HANA IVERSON & MIMI SHELLER** EDITORIAL MANAGER **ÇAĞLAR ÇETIN**

Current location technologies have become tools used by contemporary artists, theorists, designers and scientists to reformulate our understanding of social engagement within an enlarged concept of place. These new mobile networks have altered the way people exist in and relate to spaces where the real and virtual world blend, blurring the lines of traditional spatial definitions and frameworks. This special issue provides a variety of perspectives and practices on the meaning and interpretation of today's locative media.



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L.A. RE.PLAY

MOBILE NETWORK CULTURE IN PLACEMAKING

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LEA PUBLISHING & SUBSCRIPTION INFORMATION

Editor in Chief
Lanfranco Aceti lanfranco.aceti@leoalmanac.org

Co-Editor
Özden Şahin ozden.sahin@leoalmanac.org

Managing Editor
John Francescutti john.francescutti@leoalmanac.org

Editorial Manager
Çağlar Çetin caglar.cetin@leoalmanac.org

Art Director
Deniz Cem Önduygu deniz.onduygu@leoalmanac.org

Editorial Board
Peter J. Bentley, Ezequiel Di Paolo, Ernest Edmonds, Felice Frankel, Gabriella Giannachi, Gary Hall, Craig Harris, Sibel Irzık, Marina Jirotka, Beau Lotto, Roger Malina, Terrence Masson, Jon McCormack, Mark Nash, Sally Jane Norman, Christiane Paul, Simon Penny, Jane Prophet, Jeffrey Shaw, William Uricchio

Cover
Deniz Cem Önduygu

Editorial Address
Leonardo Electronic Almanac
Boston University, Arts Administration
808 Commonwealth Avenue, Room 269E, Boston, MA 02215
www.bu.edu/artsadmin
P 617-353-4064 **F** 617-358-1230 **E** aceti@bu.edu

Email
info@leoalmanac.org

Web
- www.leoalmanac.org
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To Lorraine and Earle Iverson,
visible in the space of memory.

LEONARDO ELECTRONIC ALMANAC, VOLUME 21 ISSUE 1

L.A. Re.Play: Mobile Network Culture in Placemaking

SENIOR EDITORS

LANFRANCO ACETI, HANA IVERSON AND MIMI SHELLER

EDITORIAL MANAGER

ÇAĞLAR ÇETİN

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Meanderings and Reflections on Locative Art

The word 'locative' is often accompanied by the word 'media' as if it were to seeking a legitimacy in its technologic features more than in the artistry of the production of content. Instead, I'd like to place the word 'art' at the forefront of the argument, and to consider the notion of locative art as art that is spatially contextualized, art that encompasses artistic practices that draw from movement (and/or the lack of it) and location, which is their source of inspiration, content, materiality, and context. This notion can be enlarged to encompass virtual, hybridized, and non-virtual worlds, since there is a notion of spatiality in all of them, although in some artworks this notion may be expressed as an abstraction. The desire is to move away from the word 'media,' and to take a stance that defines artworks on the basis of their aesthetic merit, rather than as being hindered by the accompaniment and masquerade of words such as media, which, far from clearing the field, create complex and unwieldy taxonomies of materials, processes, and aesthetics.

This special issue, which is based on the work done by Hana Iverson and Mimi Sheller, might appear similar to the *Leonardo Electronic Almanac* special issue, Volume 14, No. 3, which was entitled "LEA Locative Media Special Issue," and which hit the 'electronic waves' in 2006. There are several reasons why it was time to produce a new issue on Locative Art, and the most important of these was the new sense of sociopolitical consciousness that pioneers of digital technologies and contemporary artists are bringing forward. Drew Hemment wrote in his introduction to the "LEA Locative Media Special Issue":

> *Artists have long been concerned with place and location, but the combination of mobile devices with positioning technologies is opening up a manifold of different ways in which geographical space can be encountered and drawn, and presenting a frame through which a wide range of spatial practices may be looked at anew.* [1]

It is instead a step forward in the analysis of what has been produced and what locative art has evolved into over the past 10 years, from a nascence of anxiety and hope for its evolution, to its present form as an artistic medium gaining recognition within the complex world of contemporary fine arts.

This special issue should be read as an analysis of these recent evolutions, and of how locative *media* have engaged the world and mapped their own domains in the process of becoming locative *art*, now embedding itself within the increasingly contested realms of public space and social activism.

The media of the 'locative' experience have become less and less of prominent features of the aesthetic process and now figure as a component, but not as *the* component of spatially located and contextualized works of art.

The aesthetic practices of the contributors to this special issue have defined and continue to redefine the vision of what locative art should be, as well as in what context it should be 'located,' and – at the same time – have challenged traditional contextual and relational interpretations of the art object and its social and political functions.

The decision to stress the elements of spatially contextualized art resides in the increased importance that public as well as private space have gained following the technological developments that erode both spaces in favor of invasion of privacy, the blurring of public boundaries, and the control of locations, bodies, and identities. This erosion comes at the hands of corporate, state, and military regimes that, by parading ideas of democracy and social wellbeing, flaunt basic human rights while increasingly enacting dictatorial forms of control and surveillance.

The blurring of the boundaries between public and private is such that the idea of concealing one's location becomes an insurrectional act, particularly under oppressive regimes such as Turkey, where knowledge of the citizenry's location is necessary to enforce restrictions on freedom of speech. Movement, speech, media, bodies, and identity appear inextricably interconnected within contemporary societies, in which personal existence is no more, and the idea of switching off – disconnecting oneself from the systems of control and surveillance – is perceived as dangerous, insurrectional, and revolutionary.

The idea of spaces that are and must be contextualized becomes extremely important when bandying about definitions of 'armchair revolutionaries' and 'click activists.' In fact, while it may be possible to recognize and identify these armchair revolutionaries and click activists in the United States and the United Kingdom, applying the label proves more difficult in other contexts; namely, countries in which the erosion of democracy is more pronounced and readily visible. Tweeting is a dangerous activity in places like Turkey, Iran, or China, where a tweet or a click may quickly lead to the police knocking on the door, ready to enforce restrictions on freedom of speech, or, more accurately, westernized perceptions of freedom of speech disseminated over the internet that do not necessarily correspond or apply to local realities.

The current furor over whether the President of Turkey, Recep Tayyip Erdoğan, looks like Gollum, [2] the fictional character in *The Lord of the Rings* by J. R. R. Tolkien, is but one of many forms of control and crackdown. In Turkey, as elsewhere, this has created a sense of panic among the population which, by self-limiting and self-restricting its freedom, has generated a sense that the state possess a kind of digital panopticon, leading to a wide-spreading malaise of self-censorship and obedience.

This continued crackdown follows the protests at Gezi Park in 2013, after which the Turkish government apparatus refined its methods of censorship. During the Gezi Park protests, people tweeting and retweeting the news were arrested and threatened in a sweeping attempt to demonstrate the government's ability to 'locate' individuals. People with roots in the country were identified, located, and expelled by the state apparatus which targeted individuals and families who did not fit within the new neo-Ottoman agenda.

In this conflict between freedom of speech and censorship, the issues of location, as well as those artworks that use location as an aesthetic element, rise to outmost importance. The ability to locate individuals is paramount in exacting retribution, and locative media become a kind of Trojan horse that facilitates the pinpointing and identification of protesters. At the same time, locative media and augmented reality offer the opportunity to flaunt governmental oppression by layering context over controversial spaces. [3]

"There is now a menace, which is called Twitter," Erdoğan said on Sunday. "The best examples of lies can be found there. To me, social media is the worst menace to society." [4]

Erdoğan's words are reflected in Amnesty International's report, which reveals the level of intimidation employed by the Turkish government to silence opposition from a variety of sectors within civic society.

"Social media users active during the protests have been prosecuted, while attempts have been made to block the sites that carried their words and videos." [5]

It is the progressively politicized nature of space and location, as well as the act of locating, that makes locative media art political, politicized, and politicizable. [6] Hence, locative media art must be placed in the context of the political stances and struggles, or lack thereof, that will define its aesthetic, or lack of aesthetic. Conor McGarrigle recalls the Situationist International in his construction of locative situations framed as a form of alternative construction and engaged relation with life, a relation that people can define and not just passively consume.

> *To counter what they saw as the banality of everyday life, they proposed actively constructing situations rather than merely passively consuming or experiencing them. Rather than describing and interpreting situations, the situationists would seek to transform them. If, as they believed, human beings are 'moulded by the situations they go through' and 'defined by their situation', then they need the power to create situations worthy of their desires rather than be limited to passive consumers of the situations in which they find themselves.* [7]

In sociopolitical and philosophical terms, this analysis provides the opportunity to perceive life as being founded on the responsibility and sense of gravitas in human action – *faber est suae quisque fortunae* – which, by stressing the possibility of construction – the *artifex* as creator – reestablishes the Situationist International within a locative art practice that constructs and reshapes life in a social context that no longer appears to afford hope.

> *This definition of the participant in the constructed situation as an autonomous agent within the structure of the work and not limited to enacting a predefined script is key. I will identify locative works which exhibit this tendency, which go beyond a model of the participant being defined by the application in favour of an open model, a set of procedures or a toolkit with which participants construct their own situation to be 'lived' independently of the artist.* [8]

The definition McGarrigle proposes creates a dichotomy between the sociopolitical constructs and adopted behavioral models in new media versus the open procedures of engagement that enable the *artifex* to construct situations and therefore construct his/her own destiny.

It is this transformative potential emerging from the construction and/or reconstruction of space that, as editors, Hana Iverson and Mimi Sheller want to present and argue in favor of:

> *By considering the practices of process-based, socially engaged, conceptual and performance art and their relationship to activism, design and mobile art, we are able to examine the conditions of how these projects may transform place, politics, and the realm of public art.* [9]

This LEA special issue is a survey that explores and aims to understand the sociopolitical possibilities of contemporary art, and that delves into the realm of location and its contexts.

My hope is that it may offer readers the opportunity to understand the complexity of materials, processes, and contexts – as well as the contemporary responsibilities – that art practices wield in their location and construction of media outside the limitations that Marshall McLuhan defined as "rear-view mirror" approaches.

… *de meo ligurrire libidost*. Gaius Valerius Catullus, fragments.

Lanfranco Aceti
Editor in Chief, Leonardo Electronic Almanac
Director, Kasa Gallery

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L.A. Re.Play: Mobile Network Culture in Placemaking

INTRODUCTION

Artists, social scientists, and theorists have increasingly explored mobile locative media as a new kind of social and spatial interface that changes our relation to embodiment, movement, place and location. Indeed, many artists and theorists have claimed mobile locative art as a crucial form of social experimentation and speculative enactment. In the social sciences recent work especially draws attention to cultural adoption and everyday appropriation of mobile media, the re-emerging significance of place-making and locatability, and the infrastructures, regulatory regimes, and dynamics of power that shape contexts of use. [1] [2] [3] [4] This work has drawn attention to the intersection of place-making, movement, and political aesthetics. Rowan Wilken emphasizes ideas of "place as relational, as inherently connected to mobility, and as constantly worked out through mundane practice," [5] drawing on Tim Cresswell's studies of being "on the move," [6] Larissa Hjorth's work on "mobile intimacy," [7] Tim Ingold's idea of "ambulatory knowing," [8] and Ingrid Richardson's work on interactive media and forms of "visceral awareness," [9] amongst others. All of these contributions to theorizing mobile locative media are particularly relevant when it comes to interpreting recent works in mobile locative art.

In the arts and culture fields the debate on mobile media to date has focused on the creative potential of mobile locative media and ubiquitous computing, its cultural impact, and critical responses to mobile digital art. [10] [11] [12] Some of the most interesting questions concern how new mobile media can change relations between embodiment, place, and spatial awareness, echoing these debates in the social sciences. For example, media curator and theorist Christiane Paul highlights the importance of the digitally-enhanced body as a new kind of interface:

> *[D]igital technologies have expanded the agency enabled by our embodied condition: our bodies can function as interfaces in navigating virtual environments; avatars can be understood as a virtual embodiment; wearable computing can establish a technologized connectivity between bodies; and mobile devices can function as technological extension of embodiment, connecting us to location-based information and enhancing awareness of our environment or "social body."* [13]

Given the significance of artists in the debates about mobile locative media [14] [15] (see Southern in this issue), we believe it is a productive time to further explore how artworks using the new contexts afforded by mobile locative media are engaging new kinds of hybrid embodied/digital interactions with place, location, and movement.

How exactly do mobile digital technologies expand the agency of our embodied condition? In 2002, Australian media theorist Ross Gibson was asked what will be the artistry of the future; he replied that "artists will supply us with the beguiling processes of transformation … artists won't be fabricating objects so much as experiences – they will offer us intensely 'moving' immersion in (or perhaps beyond) the objective world. This immersion will be so *moving* that the 'objective world' will cease to be sensible in the ways we thought normal." [16] What will exist as art in this future vision? How does mobile art reconfigure objects, subjects, place, space and time? How does mobility extend the discussion around media art through a broader reconfiguration of cognition? As Claire Bishop asks, what does it mean "to think, see and filter affect through the digital"? [17] If the physical world is the ground for the affect produced by the digital, then how do the emerging art practices of mobile locative media immerse participants in site-specificity as well as distant networked places, and unfold local temporalities as well as deeper collective times and histories?

In this special issue we want to argue for the need to radically re-think the genealogy, purposes, and affects of mobile art, in an effort to enlarge the critical vocabulary for the discussion of "digital art," and the divides that it encounters. Arising out of a double session on *Mobile Art: The Aesthetics of Mobile Network Culture in Place Making,* and the associated mobile art exhibition *L.A. Re.Play*, co-organized and co-curated by Hana Iverson and Mimi Sheller, with assistance from Jeremy Hight – and held at UCLA, the Art Center College of Design, and the Los Angeles Convention Center as part of the College Art Association Centennial Conference (Los Angeles, February, 2012) – this project brought together some of the leading U.S. and international artists working with mobile and geo-locative media today. This concentrated series of events, along with this special issue of LEA, provides a platform and situation to reflect upon mobile media art today: where it has come from, how it is being practiced, and where it is heading.

We intend to move beyond a geo-locational or screen-based focus (that has attracted the attention of some artists due to the proliferation of smartphones) to address a body of works that extend outward to collective experiences of place. Mobile media art is one of the key arenas in which emergent interactions with the embodied and sensory dimensions of place, movement and presence itself are being explored. Crucially, it can be understood as connected to wider histories of performance art, relational art, immersive theater, experimental video, sound art, and socially engaged public art. Mobile art includes a diverse set of practices that might involve sound walks, psychogeographic drifts, site-specific storytelling, public annotation, digital graffiti, collaborative cartography, or more complex "mixed-reality" interactions. It tends to engage the body, physical location, digital interface, and social relations both near and distant, sometimes in terms of what one contributor calls "relational architecture." Through its unique visual, sonic, haptic, social and spatial affordances, mobile art provides a sensory engagement with virtual and material surroundings, mediated through the participant's embodied sensations augmented by digital technology. Featured at international festivals such as the *International Symposium on Electronic Art* (ISEA), *FutureEverything*, *Conflux* and *Radiator,* it also offers an important locus for thinking about new kinds of social engagement with other people, collectives, or publics.

In introducing this special issue we will focus on three key themes that emerge out of this body of work: first, the ways in which mobile art is socially networked and participatory, often involving the creative collaboration between artists, participants and the broader public, and what the implications of this are; second, the crucial ways in which mobile art engages with location, augmented physical presence, and sensory perceptions of place, eliciting new experiences of "hybrid space" as both a bodily and more-than-bodily experience; and third, the political possibilities for mobile locative media to add new dimensionality to public space, and thereby push the boundaries of civic engagement and politics in mobile network culture beyond its current limits. Interspersed throughout this introductory discussion we describe and locate the specific essays in the special issue, as well as noting some of the art works in the *L.A. Re.Play* exhibition. The issue itself includes a range of materials generated out of the CAA panels, the exhibition, and ongoing discussions amongst the participants, including artists' descriptions (and images) of their own work and reflection on their practice, more theoretical and historically informed analysis of aspects of mobile and networked art, interviews with artists and between co-participants in the project, and creative writing that emerged out of this year-long process.

SOCIALLY NETWORKED AND PARTICIPATORY MOBILE ART

The notion of participatory art has been trying in different ways to enlarge the consideration of art and aesthetics for more than thirty years. Mobile art, like other new media art, has a strong relationship to politically and socially engaged art in that both fields rely on "a highly critical and informed view of interaction, participation and collaboration." [18] The works we present will examine these conditions in more depth. Mobile art often happens outside the space of the gallery or museum, and without any intervening art object, as such, it may be "locative" yet hard to locate. It may appear on hand-held screens, or computer screens, often with the addition of speakers, headphones, or earbuds, but it might also extend far beyond these devices into a wider experiential realm; it may engage with the "virtual" realm, as well as mobilizing various kinds of narrative imagination and imaginaries of place; it may address the present embodied context, even as it interweaves it with histories or futures.

Emergent mobile art forms are able to take seemingly disparate elements and make sense of them to create a coherent yet unique experience for the viewer, listener, or participant. Many mobile art pieces are collaborative – engaging other artists or audiences in a shared vocabulary, and thereby incorporating their contribution into the whole. Umberto Eco, in his "The Poetics of Open Work" refers to open works "as those which are brought to conclusion by the performer at the same time he (or she) experiences them on an aesthetic plane." [19] These works are not open, in the sense of open to interpretation; they are open in the way in which they require participation in order to finish the act of the work itself. This is especially true of mobile artworks in which the relational ethics are a key part of the aesthetic.

The "relational turn" across many art activities and creative disciplines favors methodologies that are interactive, process-oriented rather than outcome-oriented, and open in Eco's terms. "Situated engagement," for example, is a theoretical frame for a participatory design approach that uses mobile technologies to focus on and design with micro-local neighborhoods, in living contexts that invite social participation and are often oriented toward social change and justice. Critic and curator Mimi Zeiger notes the link between "socially engaged art" and "tactical urbanism," which have also been embraced as more mobile and fleeting engagements with urban space:

> *[M]any activist designers have embraced "tactical urbanism" as the go-to descriptor (see the recently published and downloadable guidebook* Tactical Urbanism 2: Short-Term Action, Long-Term Change. [20] *[..] these projects are oppositional to the conventional operations – or strategies – of urban planners. Flexible and small scale, often temporary and with limited budgets, tactical projects take advantage of "chance offerings" – public spaces, empty lots, municipal loopholes. They deploy the fleetness and mobility described in [Michel de Certeau's]* The Practice of Everyday Life. [21]

Likewise, mobile art can be said to enter the urban realm in a tactical way, making use of existing spatial patterns and routes, handheld devices and forms of navigation, modes of watching and listening, yet bending these towards other purposes. It creates a new relation to place, drawing the participant into a playful and potentially awakened form of engagement; part serendipity, part chance collage, the accidents of mobilized perception form a newly mediated kind of "exquisite corpse" in a surreal game of adventure as artistic venture.

Many of the works in *L.A. Re.Play*, and those discussed in the essays in this special issue, create new modes of creative co-production and networked participation in the city, and require participation in order to be accessed. Each one depends upon its context in the public realm, and plays upon the interdependence of digital and physical experiences, which activates a renewed sense of place and flexible relationship to cartography. Various kinds of soundwalks, along with mobile Augmented Reality, distribute mobile art across a walkable terrain whereby a series of situated visual and sonic elements can be accessed and experienced by an ambulatory audience. Such works have their roots in both land art and sonic artwork, as explored further in the essay contributed by Ksenia Federova on the "sublime" potential of sound. Artist Teri Rueb, for example, whose work was presented in *L.A. Re.Play* and in an essay here, explores in her mobile auditory works "a thinking and doing landscape… to define a radically expanded field in which to consider embodied interaction and mobile media." Experiencing her work helps us "to think bodies, sensations, space and time together." [22] Several artists working with mobile media draw on the history of psychogeography, originally set in motion as a surrealist experiment with the city through the "derive," a drifting serendipity of encounter, while others lean towards mobile gaming. [23]

The artists working with mobile psycho-geography create new ways to navigate choreographies of place, now augmented with mobile and locational technologies. For example, Leila Nadir and Cary Peppermint of *ecoarttech* present their piece "Indeterminate Hikes+," which "acts as both locative artwork and practice-based inquiry into the imagination of public place and the environment in the context of networked mobility and ubiquitous computing devices." Aesthetically, though, their work is not about the technology or the mobile experience itself, but takes inspiration from Guy Debord's psychogeography, Felix Guattari's lines of flight, John Cage's random yet structured processes, and Michel Foucault's radical ethics of the self. Likewise, Australian architect Ian Woodcock discusses his collaborative works "PastCityFuture" and "en route," which "uses locative technologies, psychogeographic techniques and urban choreography to create in participants a heightened awareness of presence and context, the here and now." So the movements generated in these pieces occur both outside as a transit through space, and inside as a transformative state of being in place.

Choreographies here intersect with cartographies, which emerge as a key terrain for exploration of the digital co-production of space. Once new, but now increasingly routine, digital technologies such as Geo-Positioned Satellite (GPS) navigation systems and popular applications such as Google Earth have transformed the experience of the map as an interactive, dynamic, and multi-scalar interface, as noted especially in the essay by Dutch artists Esther Polak and Ivar Van Bekkum, which describes their project of redeploying Google Earth as an artistic medium. Their piece A Tom Tom Opera takes the viewer on a drive through a landscape accompanied by a satellite navigation-inspired choral soundtrack, which speeds past with "Doppler effect," culminating in the visual and sonic crescendo of a crash. They ask: "What happens when people move through public space, listening to an electronic voice which is controlled by an invisible network of information systems?" As a kind of opera situated on the highway, the "visualisation is based on a GPS-track and animated directly in Google Earth, using its digital cartography as a worldwide, spatial opera-stage." Maps, routes and cartographies are also explored by Robbins and Lambert, whose work "I-5 Passing" represents the atmosphere of a drive along Interstate 5, running between Los Angeles and San Francisco, as a representation of the mobile space of a particular kind of California culture. Both pieces explore the affects of digital cultures blended with cultures of automobility and the re-mixing of past and present temporalities.

Jeremy Hight also contributes to the issue with a meditation on the city of Los Angeles, reminding us of its many pasts, taking its measure, unfurling its maps. Encompassing the geological, the archaeological, the historical, and the creative, this journey through the L.A. of the imagination replays in our minds, transforming the familiar cityscape into a textured urban fabric that is "mutable, surreal, disruptive and often enchanting." [24] There are many ways of moving with and through "virtual" media that when coupled with narrative and stories seek to re-enchant the disenchanted landscape of the technologically-scripted non-place. Hight's creative writing piece reminds us that cartographies are also closely related to what Sawchuk and Thulin in their contribution refer to as "chorographies": "conceived of as a way to reconsider the temporal and affective dynamics of place through the practice of writing, reflection, and artistic practice." They draw out the tension between this affective dynamics of meaningful place and the "representational fiction of the pinpoint *within* the mapping process and the implications of this fiction for locative media artists, designers and the publics we desire to engage." To pinpoint a location does not make it a "place" until it is enacted in relation to a temporal and social context, and a single location may be unstable, and part of many such intersecting contexts.

In effect the participatory, experiential realm of mobile, locative, situated engagement not only completes the circuit of the creative act, but also redefines the consciousness, experience and agency of the participant. The artists and theorists included in this special issue engage, subvert and recombine our perceptions of place, building on traditions of Social Practice Art and Relational Art, but also engaging forms of participatory theater, experimental cinema, and collective narrative. Mobile art in this sense incorporates audiences – calling attention to their very corporeality and social/spatial situatedness – often in challenging ways. Many of these works combine evocative digital imagery, sound walks, mobile narrative, and site specificity, yet they do not necessarily require a high-tech "sentient city" [25] to make them work. They also can be distinguished from more commercial or simply entertaining forms of mobile pervasive gaming although there can be a blurring of the two areas, as found in the series of immersive theater and mobile game works by the collective Blast Theory. [26]

In re-configuring contemporary "technoscapes" and "mediascapes" enacted through the relational embodied praxis of mobile art, such works re-set or re-play "modernity at large" in new ways. [27] Mobile locative art evokes stories and creates new affordances for people to turn public spaces into meaningful places, to turn designed environments into new kinds of public experience, and to turn software interaction into potentially critical praxis. This leads to the next key element that we want to highlight: the radical mutation that mobile art can offer to our experience of space itself, through the production of a sense of immersion within digitally networked and "hybrid" place as we move through the physical world. [28]

HYBRID SPACE AND MOBILE AUGMENTED REALITIES

Mobile media artworks are at once definable and indefinable. They suspend performers and participants in a tension around co-presence and mediated interactions that defy formal modes of presentation. Many works engage, subvert and recombine our experience, perceptions, and interactions with place and location by drawing upon elements of communication and sense perception that are both immediately present and mediated by technology (sight, sound, narrative, affect, memory, history). In this issue, Jason Farman's analysis of Simon Faithfull's performance art piece, *0.00 Navigation*, for example, notes the relation between physical objects (such as fences, houses) and virtual objects (such as GPS coordinates, or the Prime Meridian) in a kind of oscillating experiential space. Mobile media artists challenge and equip us to activate new social practices and performances via "hybrid spaces" [29] that blur the distinction between physical and digital, bodily and virtual, artwork and everyday space, creator and audience. Practitioners take it as given that through everyday practices with wireless networks and mobile social media, people are creating new ways of interacting with others, with places, and with screens while moving, or pausing in movement. Emerging practices of "mobile mediality" – understood as a new form of flexible, digitally mediated spatiality [30] – are accomplished in motion, just as the artworks exloring it are not simply new apps, but are experiential happenings, performative interactional events. As such, they have implications for embodied perception.

Mobile arts practices that engage with our increasingly software-embedded and digitally augmented urbanism help to create a greater awareness of what some describe as "remediated" space, [31] "networked place," [32] or "hybrid space." [33] Media theorist Adriana de Souza e Silva, in her studies of mobile locative networks and mobile gaming, argues that "Hybrid space abrogates the distinction between the physical and the digital through the mix of social practices that occur simultaneously in digital and in physical spaces." [34] It is not one or the other, but both at once. Jay Bolter and Richard Grusin in their book *Remediation: Understanding New Media* draw a distinction between immediacy and hypermediacy. The idea of transparent immediacy, or media proposed as "interfaceless" and immersive, occurs in earlier imaginaries of Virtual Reality (VR), imagined as drawing the participant into another world. Hypermediacy, on the other hand, involves a mix or juxtaposition of elements, both digital and physical, being in this sense more like Augmented Reality (AR). [35]

In contrast to ideas of immersive media, therefore, the experience of hypermediated digital space is that it is rapidly dissolving into or permeating everyday life, especially through mobile devices. Elizabeth Grosz, in her book *Architecture from the Outside: Essays on Virtual and Real Space* argues that this dissolve takes place at the level of the perceptual, where there is a "change in our perceptions of materiality, space and information, which is bound directly to or indirectly to affect how we understand architecture, habitation and the built environment." [36] For artworks created within this hypermediated hybrid environment, the point is to create works that exist in this delimited realm both perceptually and actually. The issues of becoming remain continually processual. Such artworks have a kind of unstable or flickering presence, even while accessing multiple levels of "reality." They might involve what Paula Levine in her contribution refers to as “elastic geographies,” in which one cartography is displaced onto another to create a blurred experience of both at once, as in her work *Shadows from Another Place: San Franscico<->Baghdad* (2004). Or the materiality of digital media might involve adapting to weather, noise, and gestures within a kinaesthetic field, even as one follows an abstract GPS coordinate depicted as a blinking dot on a screen, as Sawchuk and Thulin explore in their analysis of works like *Lost Rivers* and *Montreal in/accessible*, and contributor Jen Southern explores in works such as *CoMob*.

The mobile media artists who interest us are precisely those who are exploring how to create or move within these hybrid spaces of amplified (hypermediated) reality via new modes of open (yet critically attuned) engagement with embodied experience, with urban and natural landscapes, and with digitally-mediated public space. Southern, in her contribution to this issue, delineates six elements of “locative awareness” that includes a heightened sensitivity to being situated, embodied, relational, networked, experimental, and multiple. These embodied and networked engagements with hybrid experiences transform the familiar cityscape (or, in some cases, non-urban landscape) through an intensified awareness of the urban fabric, its multiple architectures, streetscapes, and social flux, as strangely mutable, perhaps disruptive or uncanny, even enchanting. Ecoarttech’s “IndeterminateHikes+,” for example, re-enchants the city by importing into it an experience of the natural:

> *This mobile app imports the rhetoric of wilderness into virtually any place accessible by Google Maps, creates hikes, and encourages its hiker-participants to treat the locales they encounter as spaces worthy of the attention accorded to sublime landscapes, such as canyons and gorges. Thus the ecological wonder usually associated with “natural” spaces, such as national parks, is re-appropriated here to renew awareness of the often-disregarded spaces in our culture that also need attention, such as alleyways, highways, and garbage dumps. This project extends ecological awareness into mobile spaces, into the places humans actually live, democratizing conversations about environmental sustainability and ecological management that too often occur only in a scientific context.*

Contributor Martha Ladly also considers how mobile technologies “are grounded in place, creating responsive hybrid spaces in which the real, embodied, personal experiences and stories of the artist and the audience may create a powerful, participatory opportunity.” Mobile art thus addresses crucial theoretical questions about how and where participatory politics takes place, when the relation between physical space, networked space, and the growing experience of hybrid space involves the physical and the digital as co-synchronous sites of engagement, conversation, and responsive communication.

By provoking questions about the possibilities and limits of the new borders between the physical and the virtual, the real and the imaginary, the tactile and the tactical – many mobile artworks reinvent a relationship to aesthetic digital objects, interrogate public presence and memory, and deploy new strategies for intervention. Teri Rueb’s soundwalking piece *Elsewhere : Anderswo* is a site-specific sound installation across two sites. Visitors carry small GPS-equipped computers and wear headphones. Sounds play automatically in response to their movements in the landscape. As they move through layer upon layer of responsive sound, [she writes] “little elsewheres” are grafted onto the landscape in the form of variously local and foreign, synchronous and asynchronous “soundtracks.” Place is a verb. Place making and the meaning of place, “placings,” unfold as a continuous dialogue between the physical and built environment and its inhabitants.

Landscape is a special kind of “placing.” Yet her interventions she argues, are also “displacements,” which introduce multiple sensory and perceptual layers into the temporalities and subjectivities of moving through a landscape.

Participants in soundwalks can experience an embodied engagement with place and, in some cases, a re-mediated performance of everyday actions that reorganize the experience of space and time. This type of work is situated in the embodied sensory experience of landscape, but also lends itself to collective sound-mapping and the production of new mixed-reality soundscapes and mobile acoustic ecologies. Ross Gibson notes that “The rhythms with which and within which a person can *perceive*: the time spans in which we sense our acuity, these time spans are becoming ever more elastic.” [37] Mobile art becomes a way to perceive this elasticity of temporality, and reflect upon movement-space as we co-create it. And such elasticity of perception plays upon the “displacements” noted by Rueb and the “entanglements” alluded to by Southern, both of whom use GPS to subtly interfere with perceptions of place and awareness of various kinds of placement.

Locative media art has the capacity to bring together multiple rhythms of landscape that combine the live, temporal, and ephemeral aspects of a socially mapped place-ment. Picking up on Henri Lefebvre’s (2004) [38] concept of rhythmanalysis, geographer Tim Edensor argues that “rhythmanalysis elucidates how places possess no essence but are ceaselessly (re) constituted out of their connections… Places are thus continually (re)produced through the mobile flows which course through and around them, bringing together ephemeral, contingent and relatively stable arrangements of people, energy and matter.” [39] Through a kinaesthetic sense of bodily motion we apprehend time and space, but through the interventions of mobile art we also inhabit it differently. Through sensory perception and physical mass, we orient ourselves toward the world, and create both place and displacement through the frictions and rhythms of our mediated movement. Movements have different rhythms, and those rhythms of movement flow through cities and landscapes, shaping their feel, sculpting their textures, and making places. [40] For Lefebvre such intersecting trajectories and temporalities even included the polyrhythms of trees, flowers, birds, insects, and the movement of the earth, sun and soil down to the molecular and atomic levels.

So it is the coming and going of all of these mobile assemblages and interweaving rhythms that mobile artists are exploring as they experiment with the new “movement-space,” [41] a dynamic digitally-mediated spatial awareness mediating between bodies, architectures, and natures. Social theorists argue that there are ambivalent and contested “affordances” that “stem from the reciprocity between the environment and the organism, deriving from how people are kinaesthetically active within their world.” [42] “Motion and emotion” are “kinaesthetically intertwined and produced together through a conjunction of bodies, technologies, and cultural practices.” [43] The chorographies and choreographies of mobile art become a way of conjoining the affective experience of place and the effects of hypermediated locatability. Highlighting temporality becomes a way of re-thinking location, while the acute awareness of matching a physical location with a virtual object while using mobile locative media assists in a re-thinking of temporality and place. In some cases this new orientation is connected to a politics of place, location, and embodiment. Our final concern is to ask what the political implications are of some of the recent entanglements of mobility, location, and public art.

POLITICAL ART IN NETWORKED PUBLIC SPACE

Mobile artists are exploring how to create hybrid spaces of amplified reality as new modes of open engagement with embodied experience and public space. Ultimately such projects may transform place, politics, social research, and art itself, its modes of practice and forms of dissemination and engagement. Simon Sheikh in his essay “In the Place of the Public Sphere? Or the world in Fragments” refers to “counter-publics” that “entail a reversal of existing practices into other spaces and identities and practices.” [44] While the notion of counter-publics has a long history [45] there is a shifting sense of publics today, and a shifting understanding of what is public, due to a blurring of public and private as one enfolds into the other. [46] Like other critics of the Habermasian public sphere such as Iris Marion Young, Nancy Fraser, Lauren Berlant and Michael Warner, Sheikh goes on to call for this counter-public to be “relational, articulatory and communicatory.” [47] As new hybrid spaces and networked places emerge from contemporary practice, they have the potential to transform modes of political engagement and participation in the public sphere and to generate transformative hybrid approaches to the natural-social-spatial-cultural matrix in which we move, dwell, and create the future. How does this new public become a platform for different and oppositional subjectivities, politics and economies, and thereby frame a new public art?

One crucial political intervention of mobile art concerns the ways in which it brings the virtual, the augmented, and the digital into conversation with the production of bodies, spaces, sensation and affect. Sarah Drury, in particular, explores in her essay the forms of “body spatiality” that emerge in mobile augmented reality artworks. She draws on Elizabeth Grosz’s work to describe the “zone of sensitivity” that occur between an individual body and the spaces it inhabits. [48] Mobile AR works can intervene in such internalized body images by reconfiguring the spaces with which they interact. As geographer Peter Merriman notes, “writings on mobility and non-representational theory” have begun to trace “the more-than-representational, performative, expressive improvisations of bodies-in-movement-in-spaces” by describing “the production of complex entwined performativities, materialities, mobilities and affects of *both* human embodied subjects *and* the spaces/places/landscapes/environments which are inhabited, traversed, and perceived.” [49] Mobile augmented reality opens up our perception and bodily experience of the spaces through which we move, allowing the materialities and performativies of buildings, streets, surfaces, and other non-human elements of space to evoke a new kind of body spatiality – which has political implications for individual and collective agency and capacities to mobilize.

Some mobile artworks raise personal and political questions about what constitutes a public space, or a public sphere, while others address the more dystopian elements of surveillance, inclusion/exclusion, and (dis)connection in the digital era. When the group Manifest AR uses site-specific augmented reality digital imaging as an interventionist public art to infiltrate highly regulated public spaces such as Tianamen Square in China, or the US-Mexico border where immigrants are dying in the desert, or even the Museum of Modern Art in an illicit AR exhibit, it engages the overlaying quality of augmented reality to seed our political imagination with new possibilities. As they describe it:

> *The group sees this medium as a way of transforming public space and institutions by installing virtual objects, which respond to and overlay the configuration of located physical meaning. [..] Whereas the public square was once the quintessential place to air grievances, display solidarity, express difference, celebrate similarity, remember, mourn, and reinforce shared values of right and wrong, it is no longer the only anchor for interactions in the public realm. That geography has been relocated to a novel terrain, one that encourages exploration of mobile location based public art. Moreover, public space is now truly open, as artworks can be placed anywhere in the world, without prior permission from government or private authorities – with profound implications for art in the public sphere and the discourse that surrounds it.*

Other works present other kinds of opportunities to re.think, re.experience, and re.play an awareness of space, landscape and the city that spans the local and the global, the public and the intimate, calling into question the bases for such distinctions and their contemporary blurring. Artist Jenny Marketou, interviewed in this issue, uses “the city as a space and the electronic communication networks as platforms and creative tools for intervention and connection between exhibition space, public space and social interaction.” Notably her work engages with the phenomena of drone-like surveillance cameras floating above public space, closed circuit television, and the mixture of these low-resolution moving image technologies with globally networked computers and social media platforms; all of which are enacted on participating viewers crossing through public spaces of the city. She is concerned with what the new architecture and protocols of wireless networks do in terms of public surveillance, data mapping, knowledge, information and communication, issues which have become central in the field of mobile media studies. [50] Locatability has become increasingly commoditized (as something apps and big data companies trade in) and politicized (placed under sous-veillance or resisted by masking location); thus mobile locative art can remind us of what is at stake in being un/locatable. [51]

Paula Levine’s *The Wall - The World*, which was displayed as part of *L.A. Re.Play*, allows viewers to transport the “security wall” that Israel built to control Palestinian territories on the West Bank, effecting an imaginary mobility through a transposed experience of the politics of place. Focusing on a small segment of the barrier, about a 15- mile area just east of Jerusalem extending between Abu Dis in the south and Qalandiya in the north, *The Wall - The World* lets the viewer envision this 15-mile segment of the West Bank wall transposed onto any city in the world in Google Earth. The wall appears on the left side of the screen in the West Bank, and on the right side of the screen, in the viewer’s city of choice. Using Google Earth’s navigation tools as a kind of imaginary mobility, viewers can explore the impact of the structure in both areas simultaneously. *The Wall - The World* is part of Shadows From Another Place, a series of work that maps the impact of distant events in local terms, on local ground. It produces an effect that Ricardo Dominguez of Electronic Disturbance Theater (EDT) calls “lobal,” in which the global is processed through and tamed within the local, in contrast to either the predominance of the global or even the “glocal,” in which the local is transformed by global networks. [52]

The Transborder Immigrant Tool by EDT/b.a.n.g. lab (Ricardo Dominguez, Brett Stalbaum, Amy Sara Carroll, Micha Cárdenas, Elle Mehrmand), which was also presented in *L.A. Re.Play*, is a project designed to repurpose inexpensive mobile phones that have GPS antennas to become a compass and digital divining rod of sorts. Through the addition of software that the team designed, it can help to guide dehydrated migrants lost in the deserts of the US-Mexico border to water caches established by activists. It provides poetic nourishment as well, in the form of text messages conveying advice and inspiration. As an actual hand-held device, it serves as a practical and aesthetic intervention in the border, humanizing the harsh politics of the exclusionary international boundary; but it is also a disruption of the political space of the border *and of the* *aesthetics of the border*, generating intense debate and critical thought as much as material intervention. It is a clear example of the potential for critical design and its ability to make you think. As Fernanda Duarte has noted in her interpretation of the *Transborder Immigrant Tool* as a kind of tactical media, it "constitutes a model of micropolitics in practice because their subversive and critical poetics invents alternative lines of flight, and proposes temporary and nomadic constructions without making claims for a revolutionary transformation of reality or utopian designs." [53] In this issue, Electronic Disturbance Theater (EDT) have composed another kind of creative tactical intervention in what they name the "trans [ ] border." They offer the original piece "Faust y Furioso" as a play that plays with genres, boundaries, borders and crossings. Their work is further contextualized by an interview with Ricardo Dominguez, conducted by *L.A. Re.Play* participant Leila Nadir.

We hope this set of sessions, art exhibition, and this special issue of LEA will begin to lay the groundwork for a more sophisticated critical evaluation of mobile art that is fully situated in its historical context, its contemporary practice and its future potential. By considering the practices of process-based, socially engaged, conceptual and performance art and their relationship to activism, design and mobile art, we are able to examine the conditions of how these projects may transform place, politics, and the realm of public art. Visualizing internal emotional processes and relating them to route or wayfinding; constructing narratives in a virtual and spatial locality that reveal attachments and connections; positioning oneself imaginatively and actually along a continuum of nature and technology; and exploring the ephemeral quality of technologically mediated art work all assume heightened resonance when they are located in place. [54] Mobile locative media engages strategies that work against the assumptions and stabilities of site and location and are articulated through the interdisciplinary engagement of what has become a new entanglement of art with the social, technological, cartographic, and political implications of mobility.

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Mimi Sheller
Professor, Sociology, Drexel University
mimi.sheller@drexel.edu
www.drexel.edu/mobilities

Hana Iverson
Independent Media Artist
hanaiver@gmail.com
www.hanaiverson.com

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Columbia. Her more recent project *Elsewhere : Anderswo* engages visitors in a kind of play with urban place and space. See her essay in this issue for further discussion.

23. Mobile gaming combines GPS with Bluetooth short range data exchange, WiFi wireless internet, SMS short messaging service and cell networks and has emerged alongside locative art as an experimentation with urban public space via forms of "radical play" inspired by Situationist practices and ideas like the "derive" and unitary urbanism. See Sophia Drakopoulou, "A Moment of Experimentation: Spatial Practice and Representation of Space as Narrative Elements in Location-based Games," *Aether: Journal of Media Geography* 5A (2010): 63-76; and Adriana De Souza e Silva and Daniel M. Sutko, eds., *Digital Cityscapes: Merging Digital and Urban Playspaces* (New York: Peter Lang, 2009).
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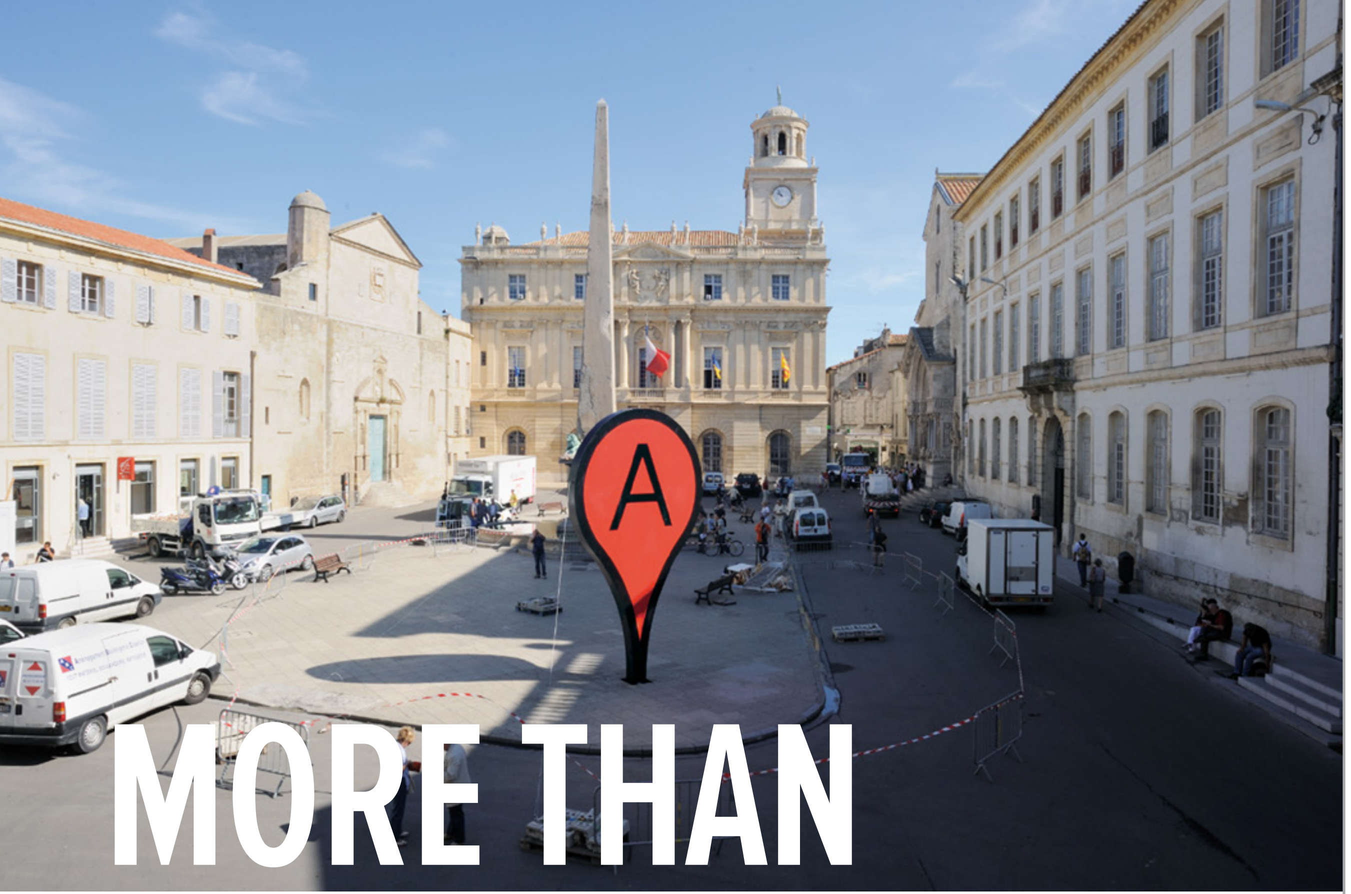

Figure 1. *Map* at Recontre Arles *From Here On*, Aram Bartholl, 2011. Photograph by Anne Foures. Courtesy of DAM Gallery and xpo Gallery. © Aram Bartholl, 2011. Used with permission.

MORE THAN JUST A PINPOINT

Locative Media and the Chorographic Impulse

by
Kim Sawchuk & Samuel Thulin

KIM SAWCHUK
Professor, Co-director of Mobile Media Lab
Concordia University
kim.sawchuk@sympatico.ca

SAMUEL THULIN
SSHRC Postdoctoral Fellow
Mobilities Lab, Centre for Mobilities Research
Lancaster University
samuel_thulin@yahoo.ca

ABSTRACT

This paper addresses the representational fiction of the pinpoint within the mapping processes associated with locative media art. These reflections on the pinpoint draw upon several locative media projects undertaken by the Mobile Media Lab over the past fifteen years as well as other locative media artists including Nikki Pugh, Paula Levine and Jeremy Hight. We examine a tension within locative media between the desire to precisely locate a place through the use of geographic coordinates, what David Bissell defines as a penchant for pointillist proximities, and the way that technologies, places and our interactions may only ever produce approximations. We ruminate on these approximations through the antiquarian concept of chorography, which emphasizes evocation and calls attention to creative forms of description as an alternative to mapping practices that seek to pinpoint locations within abstract, quantifiable space.

INTRODUCTION

> “In standardized time-space our everyday life becomes normative; a trace of coordinates and time stamps.” [1]

In 2006 German artist Aram Batholl launched the public space installation *Map*. Comprised of physical enlargements of red Google map markers, Bartholl located these giant pinpoints in the centre of various cities, as indicated by Google maps. A visually dramatic gesture, Bartholl's *Map* critically and ironically attends to the seemingly mundane political and epistemological question of cartographic decision-making, such as where a city centre is located. Through visual hyperbole, inflating the iconic red Google pinpoint, Bartholl's *Map* is a cogent reminder of how practices of mapping are related “to the technologies and politics of spatialization and the history of cartographic practices.” [2] It also illustrates our central concern – the representational fiction of the pinpoint *within* the mapping process and the implications of this fiction for locative media artists, designers and the publics we desire to engage.

There is a wide range of literature that examines geography, cartography and locative media for their paradoxical reliance on imperialist cartographies and military hardware, [3] ties to practices of surveillance, [4] and to new ways to drive consumer capitalism. [5] Much of this literature focuses on the practices of mapping and a critique of the objectivity and authority of maps. As Brian Harley writes in his highly influential text on cartography: “Maps are authoritarian images. Without our being aware of it maps can reinforce and legitimate the status quo. Sometimes agents of change, they can equally become conservative documents. But in either case the map is never neutral.” [6] Alongside the authority of the map, lies the inter-related problem of whether and how one “pinpoints” a location on this map, and what it means to put a pin on a place.

Alternative conceptions of engaging with the mapping of place and the use of mobile devices have emerged in the literature of critical cartography and discussion of art practices. Rather than focusing on the map, we explore the challenges of *mapping* and our use of GPS technology and hand-held devices by drawing attention to the problem of the pinpoint. Our ruminations call upon several locative media art projects

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undertaken under the auspices of the Mobile Media Lab over the past fifteen years including *AudioMobile, Echoscape, Burgundy Jazz, Montreal In/accessible* and *Lost Rivers*. We also make reference to locative art projects that have inspired our reflections, such as Nikki Pugh's *Landscape-reactive Sashes*, Paula Levine's *Shadows from Another Place* and Jeremy Hight's *34 North by 118 West*.

These projects have spanned significant changes in the availability and accuracy of location-based technologies as mobile devices have become more readily available worldwide. As Gemeinboeck and Saunders suggest with their own *Urban Fictions* project, the tracking capability of our mobile devices rely on "precise and categorical location, in GPS, coordinates," yet "these coordinates say little about the places they locate." [7] If latitudinal and longitudinal coordinates say little about the places they point to, the quest to pinpoint these coordinates with precision still speaks volumes about the conceptualization of space and movement with location-based assistive technologies in hand – or on the dashboard of a GPS-enabled vehicle.

Working within the tension between the drive to categorically locate and the evocation of storied place, we grapple with the dynamics of the red pinpoint, the blue dot and the flat map through a reading and deployment of the term 'chorography'. Borrowed from classical geography, chorography has been conceived of as a way to reconsider the temporal and affective dynamics of place through the practice of writing, reflection, and artistic practice. [8] In this emergent literature, what Mark Gillings calls "the chorographic legacy" functions as a method for the "the re-enchantment of landscapes deemed to have been disenchanted by science." [9] Increasingly, this re-enchantment is taking place using locative technology. To quote Jeremy Hight, "Developments in locative technology, location-based narrative and the expansion of research and work allow new hybrid narrative forms, but more importantly, allows the entire landscape to be 'read' as a digitally enhanced landscape." [10] Associated with the ways of 'describing' a place emphatically based on embodied exploration, [11] understanding the significance of the desire for the chorographic "on location" and the paradox of the pinpoint punctures the presumption of pointillist proximities, [12] and questions the reductionism of "standardized time-space" as a mere trace of coordinates and time stamps located in abstract and mathematically quantifiable space.

CHOROGRAPHY

In an early influential article on chorography, geographical historian Fred Lukermann traipses through the long history of the inter-relationship of geography, chorography and topography focusing on each term's significance for how geographers have come to understand location, or "the where." Geography typically referred to the world, as a whole. Topography referred to "the contingency of places" one next to the other, although in our time topography tends to refer to shifts in elevation. Chorography was concerned with regions, but even more within the Ptolemaic tradition as it strove towards "representing practically everything of the lands in question, even the smallest detail." [13] As Lukermann points out, topography and geography remain (though the meaning of topography has transformed significantly) but chorography largely disappeared from the mainstream of geography.

Building on Lukermann's paper, Michael R. Curry notes that it was not until the eighteenth century that the idea of absolute space entered public discourse, and it was not until the nineteenth century, with the institutionalization of land surveying methods, that the map took on the primacy we associate with it today.

Like Lukermann he suggests that the quest to arrange objects, or landmarks, on the surface of the Earth according to a grid dates back to Ptolemy, and notes that it was the use of mathematical methods that distinguished geography from chorography, the latter of which was a more qualitative approach. Commenting on the rise of the grid, Curry adds: "Here space is imagined to be absolute and pre-existing, while location is always a matter to be defined in terms of that absolute space." [14] Importantly, Curry notes recurrent counter-tendencies to notions of space as fixed, and place as a pinpoint within absolute space including Leibnitz's emphasis on the relationality and relativity of time, space and motion. For Leibnitz suggested of space "I hold it to be an order of coexistences." [15]

More recently chorography has been resuscitated as a methodological term that describes an approach to the representation of place. In her study of Italian Renaissance mapping practices, Francesco Fiorani makes the simple but elegant point that chorography derives from the combination of two Greek words, the noun chora (place) and the verb grapho (to describe). In Platonic philosophy "chora was a philosophical concept that mediated between the absolute entities of time and space and a fundamental cognitive function in experiencing the world." [16] Chorography and chronology were initially related, as descriptions not only of place, but of time. Renaissance scholars and mapmakers proposed that "chorography, as a mode of representation, could not be defined in absolute terms but only in relation to other representational modes." [17] Because of its intrinsic relative nature, Renaissance "chorographical maps could represent a region, a country, a city, a castle or an individual building." [18] It is this mutable sense of place, defined relationally through activities, sensibilities, movements and ill-defined borders that has nurtured a return to the chorographic in media studies, cultural studies, performance art and landscape archaeology through the work of Gregory Ulmer, Peter van Wyck, Mike Pearson & Michael Shanks, and Mark Gillings. What these renditions of chorography retain is attention to the importance of what Ulmer calls a heuretic approach, "the branch of logic that treats the art of discovery or invention," [19] and what van Wyck calls 'emphatic geography.' For van Wyck, in particular, chorography becomes a "memory art for negotiating with a place or a region." [20] Pearson and Shanks further identify the significance of temporality and historiography for chorography, acknowledging the influence of 18th century antiquarian traditions, and their own desire for "juxtapositions and interpenetrations of the historical and the contemporary, the political and the poetic, the discursive and the sensual; the conflation of oral testimony, anthology, memoir, biography, natural history and everything you might ever want to say about a place…" [21] Searching for a word to summarize the "fundamental chorographic quality", Gillings settles on "*evocation*." [22]

Paula Levine's *Shadows from Another Place: San Francisco <->Baghdad* exemplifies two aspects of the chorographic impulse in the era of location-based media: attention to the re-representation of region and attentiveness to place through acts of displacement. Levine describes *Shadows from Another Place* as a 'web/GPS/transposed geographies project" which overlays the sites of bombs and missiles from the first US invasion of Baghdad upon San Francisco. [23] These sites are then identified and located with GPS coordinates, the same technology used to identify the Baghdad target sites, as well as with maps and photographs. While it is not her intention to "re-enchant space" through picturesque art, through this transposition and superimposition of separate regions, Levine successfully and affectively collapses the distance of these two locations. It is a political, provocative "evocation," to use Gillings' term, using an inspired deployment of classical cartographical methods and

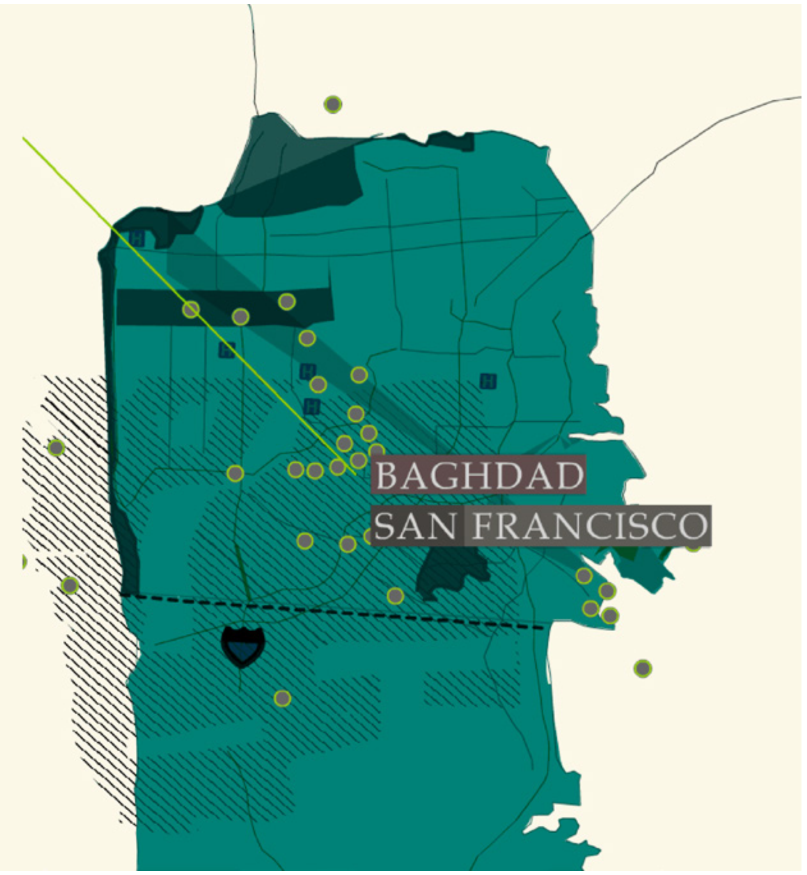

Figure 2. *Shadows from Another Place: San Franscico <->Baghdad*, Paula Levine, 2004. © Paula Levine, 2004. Used with permission.

the same technologies deployed by the military – GPS coordinates – to reconsider how a place is felt to exist in the world, relationally.

Yet, here we are brought to another point to puzzle. Is the GPS coordinate as fixed, as reliable, as steady as a polarized depiction of geographic cartography *versus* evocative chorography may assume?

PINPOINTING LOCATION. THE DANCE OF THE BLUE DOT.

I sit still at my desk in my apartment, looking at my location in the iPhone Maps app at full zoom. While the device is motionless on my desk, the blue dot on the screen dances around the building, crosses the street, comes back, and finally settles, pulsing with an ever-diminishing halo, as my phone's various locative technologies get a lock on my position. The pulsations subside. When they finally settle, I am located elsewhere than where I am: I am on the wrong side of building.

Easy to classify as "good enough", this process of simple self-location unveils the representational fiction of the blue dot as a marker of the user's current location on an interactive map. Not only is this location represented inaccurately, but so is their movement: or lack thereof. We sit. The dot dances. Yet the instability of this dot is an indication of the problem of corporeal location within the walls of a well-defined urban space. My location is not exactly static – am I at my desk, at my device, or am I also out the window, down the hall, and in fact, many places beyond the region represented on the screen? Here inaccuracy maybe honesty. Maybe the blue dot should never settle.

The complement to the blue dot is the pinpoint or map marker that indicates the location of something or a somewhere other than me with my device. Is it pointing to a building, an address, or the location of embedded digital information or user-generated content? In some ways the pinpoint progressively defies scale: moving beyond the hierarchization of things and places, it is, like the blue dot, the same size whether I am zoomed out completely and looking at the continent or maximally zoomed in looking at the street. Zoomed out it might suggest that a park can exist along with, rather than inside of a territory.[24] But at the same time, the pinpoint points to an infinite, unapproachable precision, an exact point that we could continue to zoom in on without ever reaching. The act of zooming, oriented by the mythical point, supports an approach to location that is predicated on a linear sequence of views of absolute or abstract space, rather than on a simultaneity of ways of thinking through and experiencing location chorographically.

Mobile devices and locative technology have converged in such a way that it is now almost inconceivable to imagine looking at a map on a mobile device that does not show the location of the device itself, which is more often than not read by extension as the location of the user. De Souza e Silva and Frith contend that increasingly places take on more locational aspects as they become embedded with location-based information, and the authors describe the proliferation of locations within a single place, such as a museum, in the app Foursquare. The proliferation of location-based technologies and networks that can pinpoint "where" something or someone is located indicates that "locations are gaining relevance and acquiring statuses similar to, yet distinct from, those of space and place as mediators of our social, cultural, and spatial interactions."[25] GPS, cellular towers, WiFi, and Bluetooth are all deployed to locate the device with the promise of precision. Although each functions very differently, employing distinct frequencies and ranges, once they are assembled into the device they are rendered relatively invisible. All promise of greater accuracy and precision continually on the horizon. They promise that our location and our movements, signified by a blue dot, will lead us to a red pinpoint.

Yet for those of us who design using this new language of location not all consumer-oriented devices are the same. Decisions must be made on which operating system to build for, on the minimal number of features each device will need, and on which version of that platform or device is required to access the content. Programming is long, it can be arduous, requires constant trouble-shooting, maintenance. Each assemblage offers different combinations of location-based capabilities, yet the expectation is that each and every hand-held smart phone will deliver us to our location with the same relative speed and accuracy. The present conjunction offers the benefit of perceptible frictions of imperfect technology that are often made visible within location-based media projects.

For example, in two Mobile Media Lab projects predicated on location-based accuracy, *Montreal In/accessible* and *AudioMobile*, the presence of architectural structures and barriers in the city do not always produce an accurate pinpointing of the geographical coordinates being registered by project participants onto the project map. Both programs have had to contend with GPS imprecision by allowing users to go in to the map at a later date to re-enter coordinates that are misplaced. Although in many situations we can take on a "good enough" attitude toward how accurately our location is registered, over time, with successive technological improvements, our desire to locate may increase. In the case of *AudioMobile,* a sound-recording and sound-mapping app, the misplaced coordinates may not be a danger to security – they are merely annoying to the intention of the project which ties sound to a particular place. But in the case of our location-based work with people with disabilities, such as *Montreal In/accessible*, pinpoint precision is vital, particularly in a region such as Montreal where the variations in temperature and the presence of snow along a route makes finding the most efficacious and timely means of movement between a and b a safety concern. The batteries on a motorized wheelchair, like the batteries on a cellular telephone, deplete more rapidly in the cold. The desire to engage in choreographic wanderings within and through public space are extremely weather dependent. Ironically, most pinpoints on a map and most locative media projects do not take weather into account, a point to which we will return later. [26]

In other location-based media projects, such as Nikki Pugh's *Landscape-reactive Sashes*, these geo-locational inaccuracies, this lack of pinpoint precision, provides an opening to re-imagine the representation of the relationship between location as represented by a blue dot on the screen and as embodied within a local landscape. In *Landscape-reactive Sashes,* an individual walks with *two* GPS devices in hand. [27] One person, two devices. The difference between the coordinates being registered by the two devices connected to a single participant is then registered. The resultant path, drawn on a map, is not a line that corresponds with the direction of the individual's movement, but a collection of lines that cut across that vector linking the two divergent GPS readings together. It is a map of variability, of inaccuracy. It questions our faith that we are one body, one device.

Pugh's project also makes visible the active 'emphatic' presence of the landscape and its features. Tall buildings, trees, and hills, result in greater GPS error and consequently a longer line connecting the two readings; in an open field, however, the line might be quite short. The path thus has a variable thickness corresponding to the interconnection of GPS technology and the environment in which it operates. The project shows how, rather than functioning as an abstract grid superimposed on the landscape, GPS is affected by the materiality of the spaces we move through. *Landscape-reactive Sashes* implicitly critiques the pinpoint, which typically indicates nothing about elevation, by demonstrating how the elevations of the surrounding environment directly impact GPS readings. *Landscape-reactive Sashes* pushes the problematic of the pinpoint by radically embracing the errors that are part of GPS technology and provides a unique visual portrait of the region being travelled. The drawing also calls into question the elision we feel between our selves and our devices, challenging the presumption that where my device is, is where I am.

Landscape-reactive Sashes is experienced as a group walk where further participants wear networked sashes that receive data from the person at the central node with the GPS receivers. This subverts the abstract logic of the pinpoint in embodied fashion in a slightly different manner. Small transducers within the sashes enable participants to feel vibrations at a rate determined by the degree of discrepancy between the two GPS devices. Here, the degree of error as felt through coded vibrations, rather than registered as a position seen on a screen, becomes the focus of the walk. Participants on the walk are given a buzz, made to feel the impact of the landscape on their bodies as they traverse its rugged and twisted terrain. Both create distinct chorographic performances that entwine body, technology and landscape. The landscape-induced errors in the GPS coordinates result in different types of event moments, "the product and expression of sudden communicative coherences of converging qualities inexplicably interweaving and unfolding together, even though they may originate at vastly different temporal and phenomenal scales." [28] Through the walk and the resultant visualisation, Pugh's work offers a chorographic experience, reliant on the instability of technology to produce an accurate mapping, so that landscape, people, and technological infrastructure intermingle in delightful disharmony.

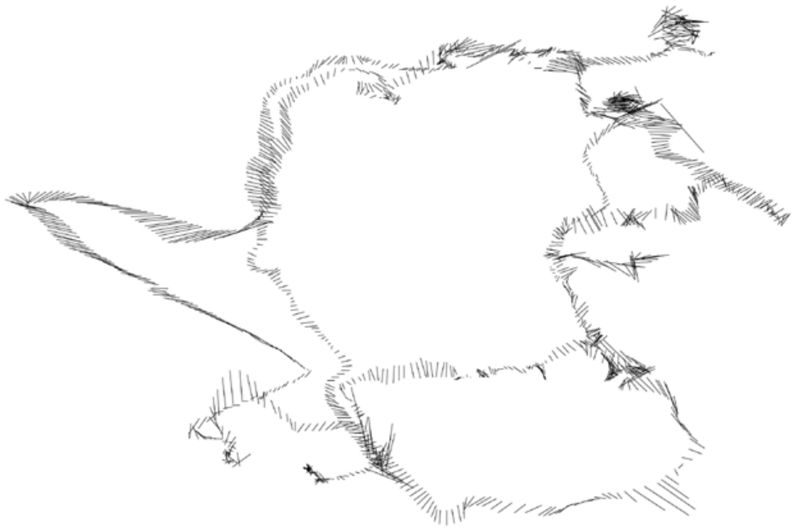

Figure 3. *Landscape-reactive Sashes:* Visualization of GPS data logged whilst walking, Nikki Pugh, 2013. www.npugh.co.uk. © Nikki Pugh, 2013. Used with permission.

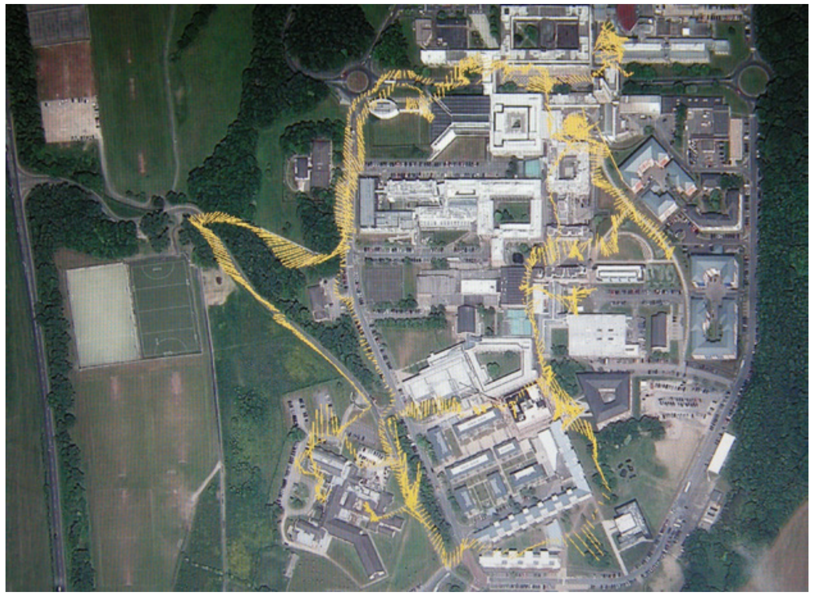

Figure 4. *Landscape-reactive Sashes:* Visualization overlaid on satellite imagery, Nikki Pugh, 2013. www.npugh.co.uk. © Nikki Pugh, 2013. Used with permission.

PINPOINTING TIME

To return to one of our opening quotes, behind every GPS coordinate is a place, a topos, but also a complex technological infrastructure, located on the land and held in the hand that makes pinpointing your individual location (or place) – elided with your possession of the device – hypothetically possible. We occupy a small region of possibility, perhaps, more than an exact location. And there is another dimension to this question of the representation of place through the artistic chorographies: temporality. The pinpoint's relation to location implies the management of one's time in the most mundane of ways. Google maps not only suggest a route, they often describe the estimated time that it will take to travel a route given current traffic and road conditions.

Connected to the promise of this device to deliver you from a to b, or to reveal the secrets behind a GPS marker, are the vagaries of time due to the indeterminacy of our movements through a landscape which is a zone of multiple interlocking temporalities. This brings us back to the connection between the chorographic and the topographic. Stan Mendyk suggests that the "chorographic" might otherwise be referred to as the "topographical-historical," [29] and Gillings, too, draws attention to the importance of the intertwining of the past, the present and place in antiquarian chorography. In describing the history of the chorographic practices, Gillings notes how perambulation and immersion in the landscape would act as a source of inspiration for representing the region in writing and drawing.[30]

Location-based media projects contend with the temporality of movement through an environment in a multiplicity of ways that attempt to represent time geo-spatially on a map. For example, one of the unique features of *AudioMobile* as a sound-recording app, is that it also records the user's coordinates at regular intervals attempting to match the pace at which one moves whether walking, cycling or driving. While users can make static recordings, represented on a map by a single pin, they are encouraged to explore a more ambulatory or chorographic recording practice that will appear on the map as a path of listening. Technically the path is made up of a series of fixed GPS coordinates, but the finality and centripetal pull of a single pinpoint is replaced by an irregular line that marks a journey and the sounds recorded over a period of time.

Other locative projects take a more 'archaeological approach' to temporal representation. Jeremy Hight, for instance describes *34 North 118 West* as a form of "narrative archaeology."[31] As users locate a coordinate, they trigger activity on screen. However, this is not a neatly ordered succession of objects and artifacts, but a jumble of items connected to that spot. A single location then reveals the sedimentation and settling of multiple pasts into a single location.

Other projects, and location-based media artists and developers try and order time sequentially through various temporal markers that explicitly date a story or an artifact as belonging to a precise moment. *Burgundy Jazz*, for example, uncovers the rich history of Montreal Jazz and little Burgundy neighbourhood, offering users timelines that mark a neighbourhood in transition from its establishment as a point on the Underground Railway, to its connection to the CN railroad and the work of the porters, most of them African Canadian, to the present. Yet like the dilemmas of the early antiquarians who made maps of national regions that tried to differentiate the presence of the past through different systems of colour coding to denote different epochs and eras, maintaining a strict order and sequence when seeding content for users to discover in a region is nearly impossible. If one uses the application, on location, any one place reveals the co-existence of stories at any one point. Here the pinpoint on the map is determined less by historical accuracy than by decisions about what stories would be of interest to imagined audiences or through consultations with communities still living at the locations in question. In other words, the persistence of multiple temporalities at a particular location haunts many of these projects which seed contents of the past into the present through the use of location-based media. It is this sense of relational co-existence between space and time that is echoed in Mikhael Bakhtin's notion of the chronotope, where time is embodied, "thickens, takes on flesh, becomes artistically visible; likewise space becomes charged and responsive to the movements of time, plot and history."[32]

What is likewise important to acknowledge is that geomorphological features, such as those recorded in *Landscape-reactive Sashes,* are temporal. Mountains and hills erode. Rivers change their course over time. *Lost Rivers,* another MML location-based media project, brings attention to the waterways that once flowed on the surface of the island of Montreal but are now buried and diverted into sewage systems. The mobile application allows users to see where the streams used to run, and to compare their meandering trajectories with the present-day grid-like arrangement of sewers and city streets. In the making of the project, the stories and places were geo-localized through two means – by studying old maps and by trying to find places where the rivers still exist in the city, and have left their traces. Yet locating these rivers in the past was no easy task. Different maps from different periods showed the streams following different courses. The trajectories of streams change over time, not only because of industrialization, but because the gradients of rivers are the function of the elevation of the landscape and are dependent on the material substrata, the very soil, over which the water runs. Multiple temporalities and rates of change run in a single river.

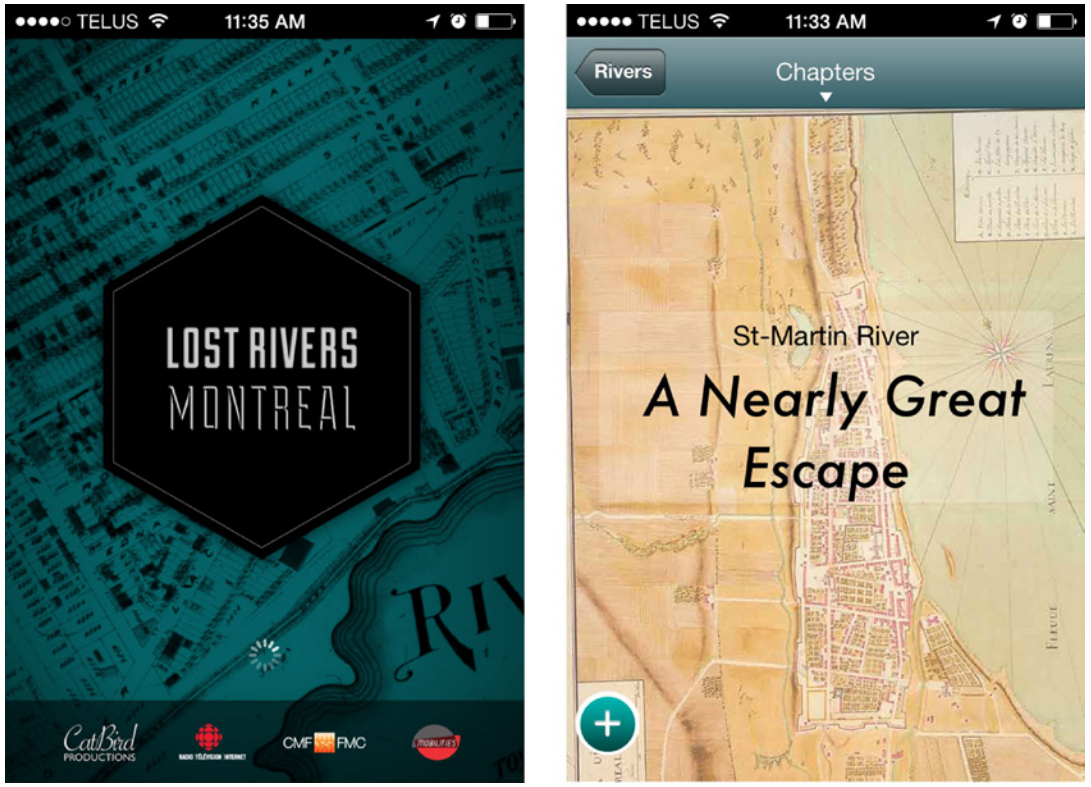

Figure 5. Screenshots from the *Lost Rivers* iPhone application. © Katarina Soukap, 2014. Used with permission.

GESTURE

Locative media projects are predicated on the ability of the application to deliver digital content made accessible at pinpointed locations. Reaching a pinpoint on a map is a request to do something. Users are given different instructions, and run through menu structures that provide a set of commands to follow to set an interaction into play. Some programs make it easy for users to interact, employing habits and bodily gestures that we are familiar with. Others, such as *Lost Rivers* were made with the explicit intent of asking participants to imagine their cell phones as another type of object. By placing their thumbs on two spots on their screens, users engage the phone as a digital divining rod that uses the geo-locational ability of the device to track the direction and orientation of movement towards the GPS coordinates where content will be unleashed. In the vast majority of these spots, information simply appears on the screen. But in nine of the locations, users are asked to engage with their phones in ways that break the familiar gesture repertoires of everyday phone use by interacting with soundscapes that change depending on the user's movements.

Carrie Noland views gestures as "organized forms of kinesis through which subjects navigate and alter their worlds,"[33] and notes the continuum of gestures from the habitual to the spectacular, as in self-conscious performances of choreography.[34] The ways in which users interact with their devices on-location, negotiating between the mobile interface and the physical environment, can be thought of as comprising a gesture repertoire. These gestures always occur within 'kinaesthetic fields', which Jaana Parviainen defines as "*the characteristic motion embedded in a certain place or location*" at a certain time.[35] Kinaesthetic fields are composed of multiple heterogeneous movements, such as, in the case of a busy street, the motions of people, animals, vehicles and other objects. Within various kinaesthetic fields, gesture repertoires are continually developing and being revised.

The contemporary gesture repertoire relating to mobile devices in public spaces is largely habitual and consists of relatively small motions contained within the boundaries of a device's touch screen – swiping, pinching, tapping etc – as well as occasional accelerometer-based gestures such as shaking or tilting the device. One of the goals of the *Lost Rivers* soundscapes is to play with the gesture repertoire in ways that might disrupt taken for granted kinaesthetic fields. In one of the soundscapes, located in a park, the user is prompted to imagine the phone as a shovel that can be used to unearth a buried river. As the user thrusts the phone towards the ground she hears digging sounds synchronized to her movement (triggered through accelerometer data) and eventually begins to hear the sounds of the river below as she virtually 'daylights' it.[36] Attention is drawn to the materiality of the device and the ways in which that materiality influences gestural relationships. Some users imagine the phone as a trowel, in which case they crouch down low to the ground to dig, while others imagine it as a long-handled shovel and remain standing. The performance of gestures acts as a bridge to other times and spaces where the user might have made that gesture before. Perceived as an unusual and even conspicuous way of interacting with one's phone in public space, the gesture can also provoke discomfort. Thus, the gesture brings into contact different ways of considering the location, relating to the history of the river as presented in the app, to the personal history of the user, to the physical environment, and to the social space experienced in the moment of interaction. Focusing on sound enables moving beyond the screen, facilitating the functioning of the device as an object in the world, ripe with possibilities for gestural experimentation, rather than as a visual portal to other layers of informational space.

Gestures occur within a kinaesthetic field that is also part of the 'volatile interface' of location.[37] The significance of this volatile interface for design is clear in one of the soundscapes that involves breathing into the phone as a way of metaphorically resuscitating a polluted river. Indoors, the soundscape works perfectly as the user's breath causes a spike in decibel levels picked up by the microphone, which triggers a change in the sounds heard in the user's headphones. However, on-location we discovered that the sound of traffic in the area would often trigger the change before the user performed the gesture; it was as though the city was breathing into the phone. This points to the way that gestural agency, as recognized by the device, is not the sole province of the user, but is vitally tied to the location itself. While the app can be tweaked to better differentiate between the location and the user, this design problem can also be used to suggest how entangled the two are.

As we are reminded by our own attempts to physically and viscerally connect the user's body to a location, when a user visits a pinpoint they are not just reaching coordinates and accessing content, they are performing a gesture that may go along with or rub up against other aspects of the surrounding environment. In doing so they are engaging in a form of location-writing in which chorography – as a practice of spatial articulation – and choreography – as a practice of corporeal movement[38] – converge. The user's gestures simultaneously shape the space and are shaped by it.

WEATHERING LOCATION

In all of the discussion of maps, pinpoints, and location-based media one of the key elements, pun intended, that is missing is the impact of weather on our experience of a location. We are mammals, endotherms. How we feel in a place and what we do in a place are connected, deeply, to weather. Yet in theorizations of the geographic, chorographic, and location-based media we find little discussion of climatic conditions related to region or location. Weather connects or disconnects body to landscape in the most visceral of ways. Pulling out a cell phone from layers of sweaters and parkas and pressing a cold plastic object to your ear whilst walking on the street, quickly affirms that there is a significant difference between a leisurely summer evening stroll in the park wrapped up in conversation, as opposed to in a polar fleece. This difference impacts our rituals, gestures and the pace at which we move whilst on location. We cannot swipe a screen with mittens. Yet if we remove them, in sub-zero weather, the fingers quickly stiffen making the subtle manipulations of a device difficult. Weather plays a dominant role in whether or not anyone will bother to use our location-based media projects.

As embodied users engaging with a location-based application, we are also walking through environments where the stimuli are not only given by the phone, GPS coordinates, or a wifi network. As we have come to learn through our work on *Montreal In/accessible,* weather is key for the engagement, or lack thereof, of participants for whom "snow is political."[39] Paradoxically, the most difficult time of year that should be recorded by participants in *Montreal In/accessible* may receive the least amount of attention because

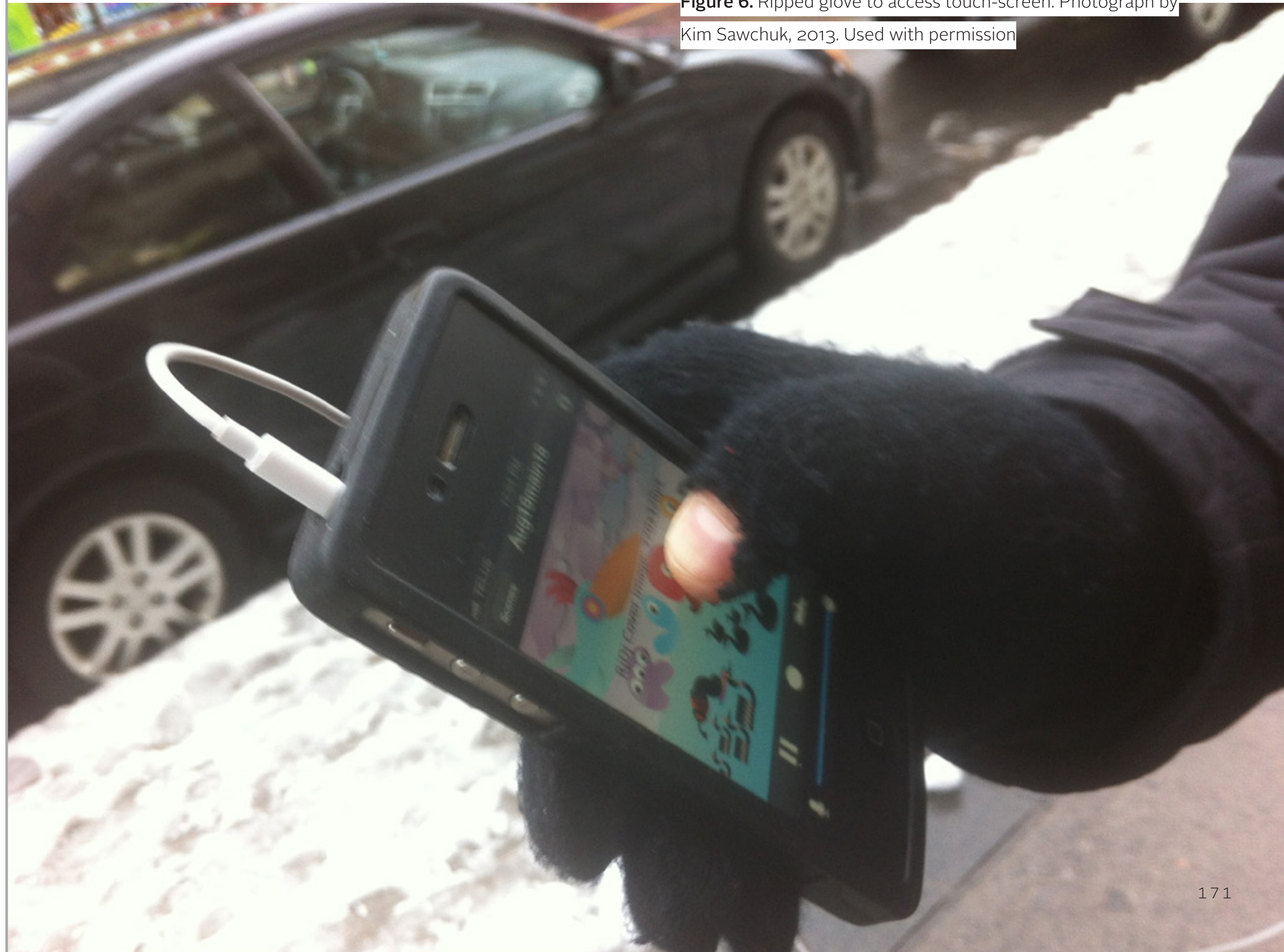

Figure 6. Ripped glove to access touch-screen. Photograph by Kim Sawchuk, 2013. Used with permission

the terrain of the city street, already replete with ableist architectural features, becomes even more difficult to navigate. Likewise, in evoking the memories of a place, it is worth asking what time of year is being represented on a map.

Location-based media are meant to be experienced on location. Out-of-doors. In this way, locative media are no different, perhaps, to any other installations that are set out-of-doors. Yet, because the delivery of locative media is tied so closely to a place and a particular technology – usually hand-held with a small screen – the influence of an environment during a particular season is even more critically important to ponder. Temperature, humidity, barometric pressure, sun, clouds and most importantly, cold, prick the skin of the user and trigger her bundles of nerve endings. This affects the amount of time we can expect a user to stand still on a location. Movement helps to keep participants warm.

Not only will the visuals change (the trees will have leaves or not) but changes in temperature affect what sounds are recorded, and the quality of those sounds. Leaves dampen sonic vibrations differently than snow. Sunshine may obscure information on a screen. A storm will drive users of an application off the trail and in pursuit of shelter. The pathways we may ask people to walk on in summer may not exist in winter or may become too dangerous. All of this is a reminder that locative media experiences are not only pinpoints on the map. We are reminded that going to a location to find a pinpoint is a profound engagement with meteorological mediations that may meddle with our carefully constructed chorographical codings of places and spaces.

CONCLUSION

As Gillings writes, the "hallmark of chorographic practice lay in with the general aim of the enterprise and character of the content recorded. Unlike a formal geography, there was a marked lack of interest in technical accuracy, surveying and mapping as a quantitative process. Instead the goal was to capture the likeness of a landscape through description 'painting the landscape in words.' [40] Yet if we are dealing with location-based media, we cannot eschew a reliance on devices that strive for technical accuracy. As we have suggested, there are many ways in which the pinpoint and maps are undermined in the new media experience, which is part of our point in writing this paper. In part, we are also motivated to speak of what doesn't work – and what is learned from the doing and the engagement. While the pinpoint may be the ultimate marker of fixity, as an indexical sign it is predicated on the idea of a connection to an actual place, and promises to re-instantiate a connection to a location-as-pinpoint with precision. Places that are pinpointed on a map, demarcating a shifting landscape, are never precise, never unchanging. They are, as we have suggested, 'volatile interfaces' located on a map traversed by "storied spaces," [41] by the sediments and residues of traces of various histories, by the seasonal changes in a landscape. These locations are imbricated through and by environmental and temporal movements, such as the vagaries of the weather and forces of gravity, that affect our engagements with technology, with each other, with that place beyond, behind, underneath the pinpoint that unsettles "pointillist" notions of proximity. As David Bissell suggests, pointillism operates as normative value that places a premium on getting from point a to b. [42]

In technologically mediated environments, location has become increasingly identified with geographical coordinates that demarcate latitude and longitude with more and more precision and exactitude. Pinpointing these coordinates, which measure distance from x to distance from y, is necessary and desirable for navigating a route to ensure a destination is reached. A few coordinates off, in the wrong context may not merely be annoying, it may be dangerous. Apocryphal stories abound about cars using location-based devices faithfully only to end up at the end of a road or worse. As well, as our work with users of motorized wheelchairs indicates, knowing with precision how long a route will take, if it is accessible, and if your battery can make it is absolutely vital.

Predicated as they are on the ability of a device to locate a user in terms of latitudinal and longitudinal coordinates, many locative media projects operate within a central point of tension: the desire to pinpoint with precision and the knowledge that not all places are so easily demarcated on a map, or capable of being found on location to unlock the 'digital enhancement' of the landscape. As Adriana de Souza e Silva and Jordan Frith suggest, a location implies having a fixed geographical coordinates, whereas some places, such as heaven and hell, may not be located on a grid. [43] All software for wayfinding, such as Google maps, are predicated on the ability to read geographical coordinates, although rarely are they displayed. Instead a more vernacular understanding of place as "street address" is typically used as an interface. The question becomes, however, as raised in earlier discussions: can we pinpoint a location with precision given the technical assemblage required – and available – on most commercial devices?

More philosophically, we might ask: what does the conflation of location-based media with way-finding produce? As David Bissell suggests with the idea of pointillist proximity, what is at the tip of the google 'pin' are pointillist assumptions about proximity and space that drive our conception of location. Pointillist proximity, as described by Bissell, is intentional, task-oriented, and about getting things done with people already known. It is about determining a direction using a map. But more importantly in terms of our relation to others, pointillism consolidates our social networks that are already known and set into place. We go to see a specific person. As his survey of literature indicates, Bissell is not dismissing pointillist proximity or saying it should not exist. His point is that much of the mobilities literature is guided by a perspective that is dependent on the value systems embedded in the perspective of pointillist proximity.

As he suggests, wandering through a neighbourhood we know, taking different routes, dwelling in an area – with no purpose is also the point. Indeed, as Bissell points out, earlier psychogeographic projects were based not on getting from a to b, but on the notion of the "derive" and "detournement", understanding distraction, losing oneself, unsettling one's habitual routes as a desirable outcome. Bissell suggests that the a to b is pointillist and that an alternative 'diagram' or metaphor of being and dwelling with nearby others (neighbours) is the loop:

> *In contrast to being orientated towards a point, the loop is a deviation that, on the face of it, defies productivism, economy and efficiency in the same way that going around in circles is suggestive of not going anywhere. [...] But in deviating from the linear, by not being oriented towards a point ahead, the loop is a movement diagram that is attuned to other near-dwellers.* [44]

Bissell's discussion resonates with the idea of chorography. And chorography further illustrates Bissell's acknowledgement that no journey rigidly conforms to either the loop or the line. [45]

Chorography necessitates an attentiveness to one's surroundings, to near-dwellers both living and non-living, that is perhaps more goal-oriented than the abstract loop, as it has historically been directed towards the project of artistically representing a place. Yet, commenting on several texts of a chorographic nature, Shanks and Witmore point out the frequency of "digressions and anecdotes and what often seem to be pointless incidents." [46] Chorography has historically occupied a role associated with middle-ground, between topography and geography, but perhaps it may also be thought of as a middle-ground between the line and the loop, or as indicating a potential simultaneity of line and loop, of pointillism and pointlessness. Like Bissell's discussion of the line and loop, chorography focuses attention on practices of engagement with place, and reveals that these should not be conceived of in monolithic terms.

At a time when pinpoints predominate, location-based media projects like the ones discussed in this paper demonstrate a chorographic impulse to evoke, to communicate a journey, to collect and compile stories and materials, to share an embodied experience of a place. Here, however, chorography need not go to battle with the pinpoint: rather, the two converge, as chorographically oriented projects may productively employ the pinpoint to create an experience that undermines the apparent rationality and precision of the point. The point is not lost, but it is critically engaged. ■

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