

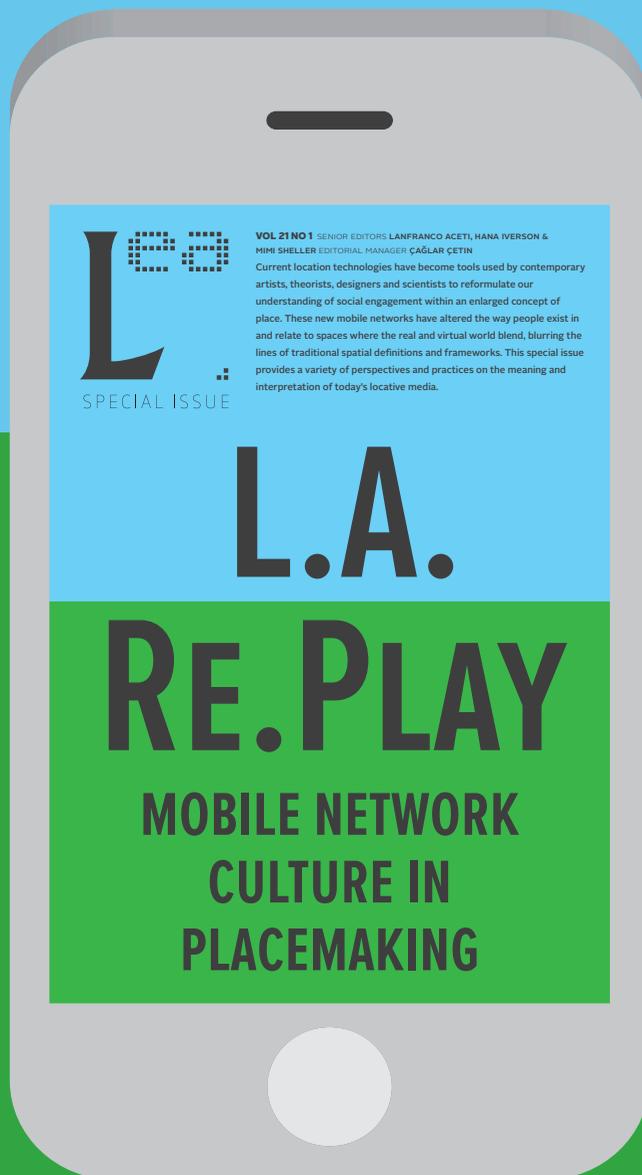
L

leao

SPECIAL ISSUE

VOL 21 NO 1 SENIOR EDITORS LANFRANCO ACETI, HANA IVERSON & MIMI SELLER 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.





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

INTRODUCTION

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

In 2006 German artist Aram Bartholl 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 poli-

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.

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.

tics 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

undertaken under the auspices of the Mobile Media Lab over the past fifteen years including *AudioMobile*, *Echoscapes*, *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 disenchanting 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 heuritic 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 Francisco* ←→*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 chorographic 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

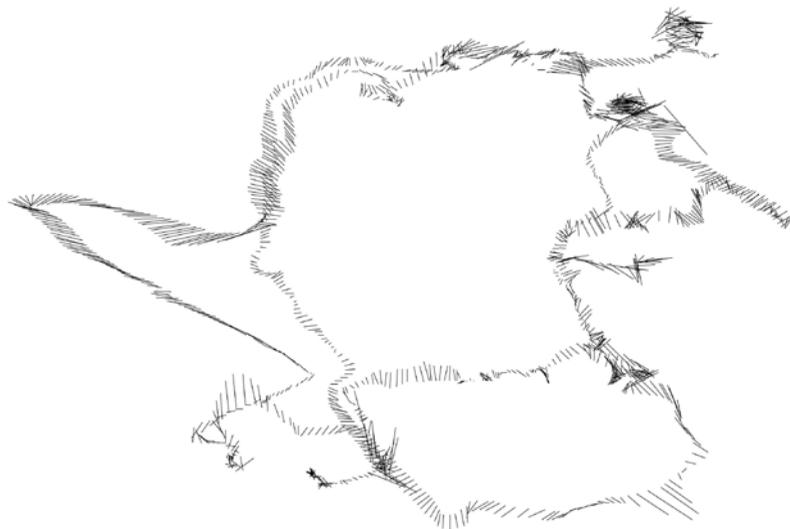


Figure 3. *Landscape-reactive Sashes*: Visualization of GPS data logged whilst walking, Nikki Pugh, 2013. www.npugh.co.uk. © Nikki Pugh, 2013. Used with permission.

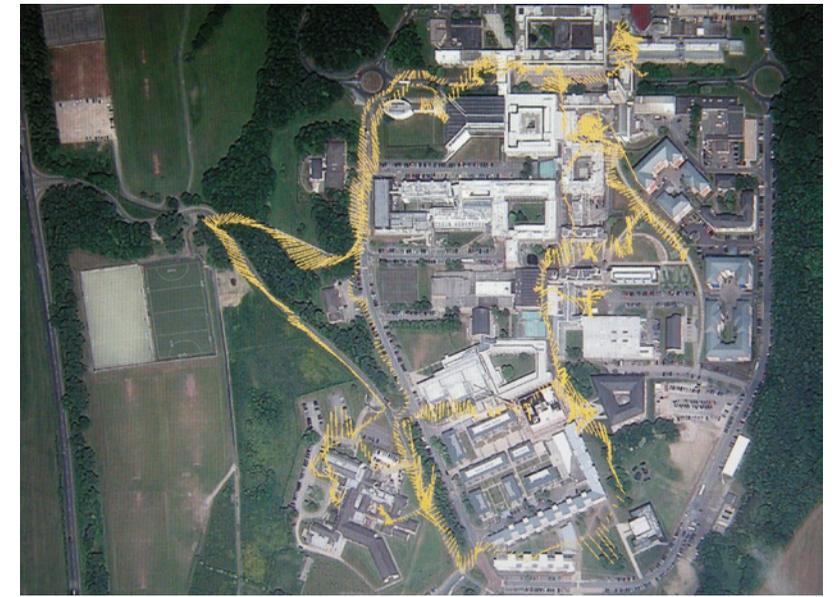


Figure 4. *Landscape-reactive Sashes*: Visualization overlaid on satellite imagery, Nikki Pugh, 2013. www.npugh.co.uk. © Nikki Pugh, 2013. Used with permission.

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.

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

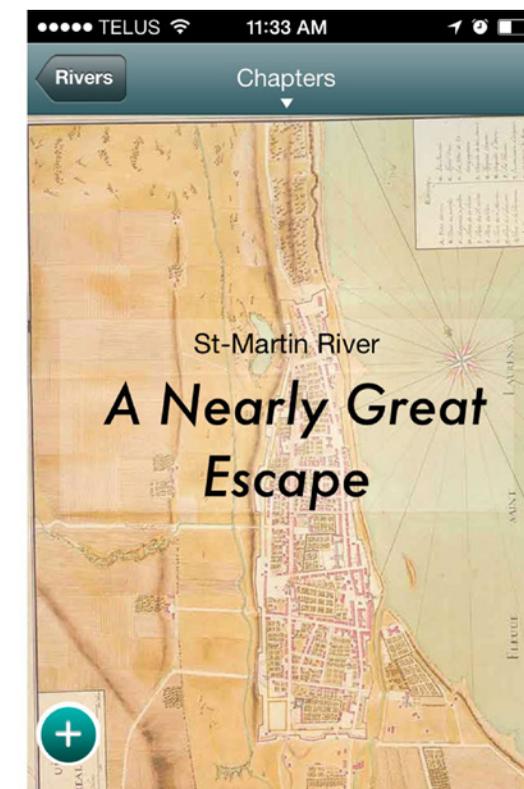


Figure 5. Screenshots from the *Lost Rivers* iPhone application. © Katarina Soukap, 2014. Used with permission.

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.

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 choreography – as a practice of spatial articulation – and choreography – as a practice of corporeal movement³⁸ – 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 ab-

stract 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. ■

ACKNOWLEDGEMENTS

We would like to acknowledge the support of the Social Sciences and Humanities Research Council of Canada (SSHRC) who have supported The Lost Rivers project and AudioMobile through programs which include funding for research creation.

REFERENCES AND NOTES

- Petra Gemeinboeck and Rob Saunders, “Urban Fictions: A Critical Reflection on Locative Art and Performative Geographies,” *Digital Creativity* 22, no. 3 (2011): 162.
- Ibid., 160.
- See Coco Fusco, “Questioning the Frame: Thoughts About Maps and Spatial Logic in the Global Present,” *In These Times*, December 16, 2004, <http://inthesetimes.com/article/1750/> (accessed January 27, 2014); Brian Holmes, “Drifting Through the Grid: Psychogeography and Imperial Infrastructure,” *Springer*, no. 3 (2004), http://www.springer.at/dyn/heft_text.php?textid=1523&lang=en (accessed January 27, 2014); Rita Raley, “On Locative Narrative,” *Genre* 41, no. 3-4 (2008): 123-147.
- See Adriana de Souza e Silva and Jordan Frith, “Locational Privacy,” in *Mobile Interfaces in Public Spaces: Locational Privacy, Control, and Urban Sociability* (New York: Routledge, 2012), 111-135; Eric Gordon and Adriana de Souza e Silva, “Privacy,” in *Net Locality: Why Location Matters in a Networked World* (Malden, MA: Wiley-Blackwell, 2011), 133-154; Drew Hemment, “The Locative Dystopia,” *net-time.org*, 2004, <http://amsterdam.nettime.org/Lists-Archives/nettime-l-0401/msg00021.html> (accessed January 27, 2014); Andre Lemos, “Locative Media and Surveillance at the Boundaries of Informational Territories,” in *ICTs for Mobile and Ubiquitous Urban Infrastructures: Surveillance, Locative Media and Global Networks*, ed. Rodrigo J. Firmino, Fabio Duarte, and Clovis Ultramari (Hershey, PA: Information Science Reference, IGI Global, 2011), 129-149; Andrea Zeffiro, “The Persistence of Surveillance: The Panoptic Potential of Locative Media,” *Wi: Journal of Mobile Digital Commons Network* 1, no. 1 (2006), http://wi.hexagram.ca/1_1_html/1_1_zeffiro.html (accessed January 27, 2014).
- See Carlos Barreneche, “Governing the Geocoded World: Environmentality and the Politics of Location Platforms,” *Convergence: The International Journal of Research into New Media Technologies* 18, no. 3 (2012): 331-351; Geert Lovink, “The Cool Obscure: Crisis of New Media Arts,” in *Zero Comments: Blogging and Critical Internet Culture* (New York: Routledge, 2008), 39-81; Marc Tuters and Kazys Varnelis, “Beyond Locative Media: Giving Shape to the Internet of Things,” *Leonardo* 39, no. 4 (2006): 357-363.
- J. B. Harley, “Deconstructing the Map,” *Cartographica* 26, no. 2 (1989): 14.
- Petra Gemeinboeck and Rob Saunders, “Urban Fictions,” 161.
- See Mark Gillings, “Chorography, Phenomenology and the Antiquarian Tradition,” *Cambridge Archaeological Journal* 21, no. 1 (2011): 53-64; Peter C. van Wyck, “An Emphatic Geography: Notes on the Ethical Itinerary of Landscape,” *Canadian Journal of Communication* 33, no. 2 (2008): 171-191.
- Mark Gillings, “Chorography Phenomenology and the Antiquarian Tradition,” 54.
- Jeremy Hight, “Views from Above: Locative Narrative and the Landscape,” *Leonardo Electronic Almanac* 14, no. 7-8 (2006): 1.
- See Jill O’Sullivan, “Chorography: Reflections on Its Place in Visual Literacy and Creative Arts” (paper presented at 3rd Global Conference, Visual Literacies: Exploring Critical Issues, Oxford, 2009); Michael Shanks and Christopher Witmore, “Echoes Across the Past: Chorography and Topography in Antiquarian Engagements with Place,” *Performance Research* 15, no. 4 (2010): 97-106; Peter C. van Wyck, “An Emphatic Geography,” 171-191.
- David Bissell, “Pointless Mobilities: Rethinking Proximity through the Loops of Neighbourhood,” *Mobilities* 8, no. 3 (2013): 349-367.
- Claudius Ptolemy, quoted in Fred Lukermann, “The Concept of Location in Classical Geography,” *Annals of the Association of American Geographers* 51, no. 2 (1961): 194.
- Michael R. Curry, “Discursive Displacement and the Seminal Ambiguity of Space and Place,” in *Handbook of New Media: Social Shaping and Consequences of ICTs*, ed. Leah A. Lievrouw and Sonia M. Livingstone (London and Thousand Oaks, CA: SAGE, 2002), 506-507.
- Gottfried Wilhelm von Leibniz, *The Leibniz-Clarke Correspondence together with Extracts from Newton’s Principia and Opticks*, ed. H. G. Alexander (Manchester: Manchester University Press, 1956), 3rd paper, para. 4, quoted in Michael R. Curry, “Discursive Displacement,” 507.
- Francesca Fiorani, *The Marvel of Maps: Art, Cartography and Politics in Renaissance Italy* (New Haven, CT: Yale University Press, 2005), 188.
- Ibid.
- Ibid.
- Gregory Ulmer, *Heuretics: The Logic of Invention* (Baltimore: Johns Hopkins University Press, 1994), 39.
- Peter C. van Wyck, “An Emphatic Geography,” 185.
- Mike Pearson and Michael Shanks, *Theatre/Archaeology* (London and New York: Routledge, 2001), 64-65, quoted in Michael Shanks’ website, “Chorography,” March 2012, <http://documents.stanford.edu/MichaelShanks/43> (accessed January 31, 2014).
- Mark Gillings, “Chorography, Phenomenology and the Antiquarian Tradition,” 58, italics in original.
- The Banff Centre website, “Paula Levine Biography,” <http://www.banffcentre.ca/faculty/faculty-member/3008/paula-levine/> (accessed January 31, 2014).
- While it is beyond the scope of this paper, these discussions on the conceptualization of space in geography have taken a new turn in debates on ‘flat ontologies’ which question the idea of the use of scale in mapping. See Sallie A. Marston, John Paul Jones III, and Keith Woodward, “Human Geography Without Scale,” *Transactions of the Institute of British Geographers New Series* 30, no. 4 (2005): 416-432.
- Adriana de Souza e Silva and Jordan Frith, *Mobile Interfaces in Public Spaces*, 11.
- The Lost Rivers application and Burgundy Jazz are collaborations between Catbird Productions (dir. Katerina Soukup) and Kim Sawchuk, Mobile Media Lab. Audio-Mobile is a SSHRC-funded project directed by Dr. Owen Chapman, Mobile Media Lab. *Montreal In/accessible* is a Mobile Media Lab collaboration with Barcelona artist Antonio Abad.

27. Nikki Pugh's Landscape-reactive sashes were developed with support from Fermynwoods Contemporary Art.
28. Sanford Kwinter, *Architectures of Time: Toward a Theory of the Event in Modernist Culture* (Cambridge, MA: MIT Press, 2001), 22.
29. Stan Mendyk, "Early British Chorography," *The Sixteenth Century Journal* 17, no. 4 (1986): 459.
30. Mark Gillings, "Chorography, Phenomenology and the Antiquarian Tradition," 58-59.
31. Jeremy Hight, "Views from Above," 2.
32. M. M. Bakhtin, *The Dialogic Imagination: 4 Essays*, trans. Caryl Emerson and Michael Holquist (Austin, TX: University of Texas Press, 1981), 84.
33. Carrie Noland, *Agency and Embodiment: Performing Gestures/Producing Culture* (Cambridge, MA: Harvard University Press, 2009), 4.
34. *Ibid.*, 6.
35. Jaana Parviainen, "Choreographing Resistances: Spatial-Kinaesthetic Intelligence and Bodily Knowledge as Political Tools in Activist Work," *Mobilities* 5, no. 3 (2010): 320, italics in original. Parviainen builds on the work of Edmund Husserl, Edith Stein, and Martin Heidegger in her conceptualization of 'kinaesthetic fields.'
36. 'Daylighting' a stream is a practice of restoring above-ground water flow to a waterway that has previously been buried.
37. Barbara Crow, Michael Longford, Kim Sawchuk, and Andrea Zeffiro, "Voices from Beyond: Ephemeral Histories, Locative Media and the Volatile Interface" in *Handbook of Research on Urban Informatics: The Practice and Promise of the Real-Time City*, ed. Marcus Foth (Hershey, PA: Information Science Reference, IGI Global, 2009), 158-178.
38. Michael Tawa, "Place, Country, Chorography: Towards a Kinesthetic and Narrative Practice of Place," *Architectural Theory Review* 7, no. 2 (2002): 49.
39. Laurence Parent, "The Politics of Snow" (paper presented at the 4th Joint International Conference of the Pan-American Mobilities Network and the Cosmobilities Network: Differential Mobilities, Montreal, 2013).
40. Mark Gillings, "Chorography, Phenomenology and the Antiquarian Tradition," 58.
41. Barbara Crow, Michael Longford, Kim Sawchuk, and Andrea Zeffiro, "Voices from Beyond," 158-178; Johanna Brewer and Paul Dourish, "Storied Spaces: Cultural Accounts of Mobility, Technology, and Environmental Knowing," *International Journal of Human-Computer Studies* 66, no. 12 (2008): 963-976.
42. David Bissell, "Pointless Mobilities," 349-367.
43. Adriana de Souza e Silva and Jordan Frith, *Mobile Interfaces in Public Spaces*, 10.
44. David Bissell, "Pointless Mobilities," 358-359.
45. *Ibid.*, 364.
46. Michael Shanks and Christopher Witmore, "Echoes Across the Past," 100.

THE SOCIAL

4TH INTERNATIONAL ASSOCIATION FOR VISUAL CULTURE BIENNIAL CONFERENCE

29/09 – 01/10/2016
BOSTON UNIVERSITY

WWW.OCRADST.ORG/VISUALCULTURE2016/

