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SPECIAL ISSUE

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.

L.A. Re.Play

MOBILE NETWORK CULTURE IN PLACEMAKING

To Lorraine and Earle Iverson,
visible in the space of memory.

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

SENIOR EDITORS
LANFRANCO ACETI, HANA IVERSON AND MIMI SHELLER

EDITORIAL MANAGER
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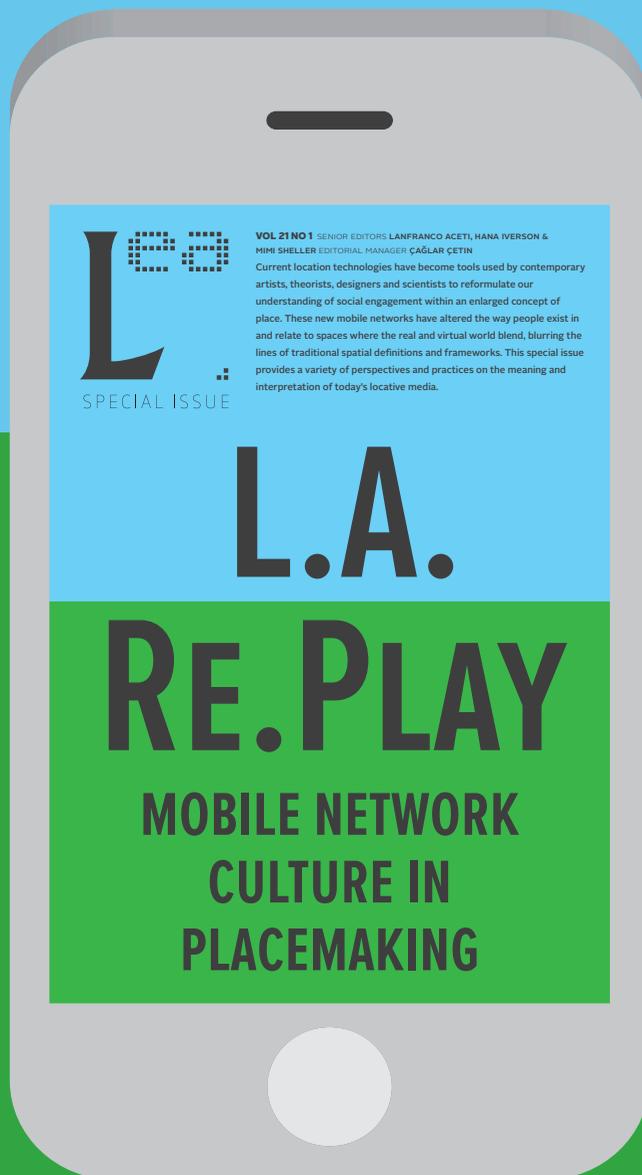
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Meanderings and
Reflections on Locative Art

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 Interna-
tional's report, which reveals the level of intimidation
employed by the Turkish government to silence oppo-
sition 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 politiciz-
able. [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 be-
> ings 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 con-
structs 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 be-
> yond 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' indepen-
> dently of the artist. [8]

The definition McGarrigle proposes creates a di-
chotomy between the sociopolitical constructs and
adopted behavioral models in new media versus the
open procedures of engagement that enable the *ar-
tifex* 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 pres-
ent 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 responsi-
bilities – that art practices wield in their location and
construction of media outside the limitations that
Marshall McLuhan defined as "rear-view mirror" ap-
proaches.

... 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 "Indeter-minateHikes+," 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 inter-

ventions 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 lo-

cation 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.

ACKNOWLEDGEMENTS

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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22. Teri Rueb's *Trace* (1999) was one of the first geo-annotated mobile art projects, using GPS coordinates embedded in the landscape to access a sound installation designed as a memorial environment in Yoho National Park, British

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.

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RESTLESS

Locative Media as Generative Displacement

by

Teri Rueb

Professor, Department of Media Study
State University of New York at Buffalo
terirueb@gmail.com
http://www.terirueb.net/

Figure 1. *Drift*, Teri Rueb, 2004. Walker on the tidal flats. © Teri Rueb, 2004. Used with permission.

A B S T R A C T

This chapter presents a practice-based conceptual framework for imagining locative media as a form of generative displacement. Weaving concepts drawn from process philosophy and affect theory through an account of my own locative media practice as it has evolved over the past fifteen years, I aim to reveal locative media as a form of generative displacement where the body is reconfigured in its relation to itself, to the environment, and to others, including human and non-human agencies and subjectivities.

INTRODUCTION

My work begins with an invitation. Take a walk or a ride. Get out and explore the everyday environment in a new way, using the movement of the body as a means of releasing the mind, allowing it to wander – and to wonder, critically and aesthetically.

In these works participants explore a site while carrying a portable computer or cell phone equipped with a global positioning satellite (GPS) receiver. The GPS tracks the participant's movement and the resulting data is used to activate sound playback in response to their changing position in the landscape. Each work is a composition of geolocated sound regions specified in software that runs locally on the device, coupling virtual and physical space at the scale of landscape.

Participants literally bring the work into being through the physical action of walking, bicycling, driving, etc. Through kinesthetic engagement, body and environment come into contact as if in a dance composed of everyday movements. The sound overlay in each work brings attention to the physical and social contours of the natural and built environment even as it challenges participants to unconventional habitations – a kind of reading against the grain of the physical text and context of the environment.

Through the sound overlay I seek to tease out, highlight, and choreograph a sampling of physical and social elements, itineraries and events that are inherent to a site. However, the primary structure of the work emerges from the unpredictable actions of the participant herself who performs in dialogue with variable social and environmental conditions. This interaction of site and subject, where each emerges through the confluence of physical, social, cultural, and technological forces acting upon each other in situ, is a defining aspect of "locative media."

The term "locative media," coined by Karlis Kalnins, [1] emerged around 2002 as a way of distinguishing cultural uses of mobile media which critiqued the notion of "space" as an a priori or absolute abstraction and reinscribed "place" as a culturally specific and historically grounded concept. In this chapter I use the term 'mobile experience' to refer to the broad domain of everyday experience that is mediated by location-sensing technologies, including commercial and industrial productions. 'Mobile experience' encompasses the full spectrum of technologies that wed physical and virtual spaces to each other geospatially via software, regardless of their claim to the more specific designations of 'locative media.'

Mobile experience involves the use of mobile media which engender a shifting of the sensorium that emerges as a result of our habitual use of these technologies in everyday life. Marshall McLuhan is credited with first observing that our interactions with media, as extensions of the body, have the effect of altering the perceptions and sensitivities of the human sensorium. [2] For example, one effect of this shifting sensorium in response to the proliferation of mobile

media is a heightened awareness of the reception quality of GPS, WiFi, and cellular networks (and their combination) as they relate to our perception of the built environment and our movement within it. Hence, mobile experience, not exclusive to the domain of locative media, is composed of a constant flux of physical, cultural, and psychological displacements where the hybrid physical and virtual contexts in which we increasingly interact create a third space, or what Sabine Breitsameter (2003) has called a *hybrid space*. [3] This hybrid space can be disorienting, destabilizing, and decentering of the body as well as our sense of place and cultural identity.

Rather than seeing these frictions as a negative effect of mobile media – something to be 'designed away' or mitigated, I argue that acknowledging and embracing such instabilities actually forces us to productively negotiate what are always-already shifting dimensions of a hybrid spatial condition vis-à-vis our perception and experience of place, and thus cultural identity. This constant process of negotiation underscores the inherently unstable condition of subjectivity which, while a given in all cultural contexts, may be exercised as a critical design agenda in highly technologized, mobile, and multicultural societies.

Just as an increasingly technologized and global society entails increasingly complex collisions of cultures and identities, mobile experience compounds these effects not just at the level of the physical sensorium, but also at the level of cultural identity and subjectivity. Technologies, bodies, and subjectivities are inseparably intertwined in everyday experience, and mobile technologies further intensify these entanglements. Mobile interfaces couple bodies in motion with places in motion – as process – blurring local with global, public with private, physical with virtual, and the proverbial 'here-and-now' with 'there-and-then'. In this way they contribute to and intensify the constant dis-

placement of bodies, sites, and subjectivities in highly mobile technologized society.

Inherent to the condition of mobile subjectivity, such displacements frustrate constructions of place, subjectivity, or the body as stable or fixed entities. This instability extends to authorship, too, which becomes a shared act in locative media works, not just at the level of interpretation, but in the very physical process of bringing the work into being. Authorship, like meaning, becomes emergent, contextual, and *kinesthetically* inflected, especially in locative media works that tend to exploit the indeterminate conditions of moving bodies in hybrid spaces. In all mobile experience, whether acknowledged or not, displacements of bodies and meanings unfold like constantly shifting horizons of context, meaning, and interpretation. In locative media such displacements are embraced and indeed emerge as unique qualities of this new form, medium, and genre. Through elaborating these effects as they generate and complicate meaning in artworks taken from my own practice, I present a position from which locative media may be understood as holding the potential for a kind of generative displacement.

This article presents a practice-based conceptual framework for imagining locative media as a form of generative displacement. Weaving concepts drawn from process philosophy and affect theory through a narrative of my own locative media practice as it has evolved over the past fifteen years, I will aim to reveal locative media as a form of generative displacement where the body is reconfigured in its relation to itself (the sensorium), to the environment (through both physical and cultural perception of place), and to others, including human and non-human realms. Through Elizabeth Grosz's reading of Gilles Deleuze and Felix Guattari [4] I will trace the ways in which emergence, embodiment, and the affective come together in the experience of the 'sensory-sensual body' [5] as it moves

through and produces variously politically and culturally charged landscapes. Four projects that engage collisions of bodies and landscapes will be addressed: the shifting sensorium itself as a kind of landscape (*Drift*, 2004); the affective experience of post-industrial waste landscapes (*Core Sample*, 2007); perception and representation of landscape and cultural identity in globalized media culture (*Elsewhere : Anderswo*, 2009); and the contested meanings of place and identity in post-colonial discourses about 'wilderness' as it relates to landscapes of the Southwestern United States (*No Places With Names*, 2012).

A LANDSCAPE APPROACH TO LOCATIVE MEDIA

Having made interactive public art installations in outdoor settings since 1990, I draw upon landscape as a first framework for understanding mobile experience. Landscape and the body are mutually constituted in mobile experience. A continuing point of reference for this is found in the history of sculpture, performance, and installation, all of which engage the body in spatial interactions writ large at the scale of landscape. The performative role of the participant is essential to the production of meaning in mobile experience. Minimalism recognized this, especially in the context of large-scale outdoor sculpture and land art, drawing attention to the phenomenological experience of the viewer as performer/participant. In particular, Robert Smithson articulates this aspect of his work as the critical unfolding of view upon view through the actions of a walking participant-observer who perambulates around the space of the sculpture, which itself functions as a kind of landscape. [6] Smithson was among the first artists to create earthworks such as *Spiral Jetty* (1970), an enormous raised earth form shaped like a spiral that extends into the Great Salt Lake in Utah. He argues that the kinesthetic mode of consumption required in experiencing this work

from the ground is essential to comprehending, understanding, and appreciating it. The scale of the work in relation to the body distinguishes it from traditional sculpture which was conventionally presented on a pedestal in a gallery or as a bounded and contained object in outdoor settings, viewable within the scope of a singular static sweep of the gaze. Earthworks such as Smithson's can be seen as providing an historical precedent and theoretical lineage to locative media especially as the performer/participant is framed as a kinesthetic agent in the construction of the work and its meaning.

Yves Alain Bois presents this argument succinctly, comparing Robert Smithson's (1979) and Richard Serra's (1982) writings about their early land art and earthworks in his essay "A Picturesque Stroll Around Clara-Clara." Richard Serra, best known for his enormous steel sculptures, is quoted. Speaking of his work *Rotary Arc* (1980), Serra writes: "The site is redefined, not represented [...] the placement of all structural elements in the open field draws the viewer's attention to the topography of the landscape as the landscape is walked." [7]

Echoing this emphasis on the walking viewer, Smithson relates Serra's work to the notion of the picturesque, which he defines in relation to Heidegger's notion of a 'thing-for-us':

> The picturesque, far from being an inner movement of the mind, is based on real land; it precedes the mind in its material external existence. We cannot take a one-sided view of the landscape within this dialectic. A park can no longer be seen as a "thing-in-itself," but rather as a process of ongoing relationships existing in a physical region – the park becomes a "thing-for-us." [8]

In each case the emphasis is on the actual land and the experience and perceptions of the walker/viewer as she traverses it. In mobile experience site functions in

a similar manner as a "thing-for-us," yet perhaps even more so as the site of mobile experience is a flux of physical and virtual spaces and times that are experienced both individually and collectively as unique itineraries through matter and media.

Through my work I critically reconfigure relationships of place and subjectivity through drawing attention to entanglements of context, movement, and perception as processes through which places, subjectivities, and identities emerge. My practice participates in these entanglements, seeking to expose or bring to critical consciousness their various permutations and cultural effects, including the ways in which space, place, and cultural identity are ineluctably bound to each other in mobile experience.

The word itself

The concept of landscape complicates distinctions between the proximal and distal, urban and rural, developed and undeveloped, local and global, the human and non-human, nature and culture, thing and process. Thus it provides an especially useful conceptual pivot around which very different ways of knowing and doing may come together and be used to reveal the operations of mobile network culture and society. [9]

The very word landscape has multiple, and often contested, meanings. It productively opens on to an expansive and inclusive field of inquiry and practice around questions of space, place, environment, and subjectivity. Any attempt to locate the meaning of the word reveals not only its extraordinary polyvalence, but also the reflexivity of landscape itself as a contextualizing function. Depending on how it is defined, landscape may be understood to provide the backdrop for the environment in which humans dwell, or as the environment itself. Whether understood as biophysical, perceptual, cultural, or political, it indicates a set of relationships between humans and envi-

ronments, a play of human and non-human forces that ultimately suggests a process approach to the design space of mobility. Indeed, the very notion of what this 'space' implies is of concern here as this paper seeks to assert a critical design agenda. The normative design space of mobile media is often limited to the screen of the mobile device itself, as information overlays are registered against maps or other interfaces reflecting feedback from real-time location tracking. In suggesting a 'process' approach to the design of mobile media, I aim to shift the extent of this design space to explicitly include the whole space of body-site-movement interaction, not just on-screen interaction, with location-sensitive information or responses.

Across languages, cultures, and disciplines, *landscape* has strikingly different meanings, or may resist translation entirely. For example, landscape has a long history in the West of being associated primarily with the specular or objectifying gaze and the picturesque, in the sense of the pictorial. It has been objectified as resource for exploitation, object of the patriarchal or colonial gaze, and framed as feminized 'nature' when treated as the passive 'background' for human activity, rather than as active social, cultural, or material process. [10] Throughout these varying contexts, however, the concept of landscape both explicitly and implicitly serves to frame and ground our understandings of place, culture, and identity. In this it performs as an active and contextualizing function that, like the physical form of landscape itself, is fundamentally temporal and constantly in flux. For example, in the American West, landscape is less operative as a cultural idea associated with a picturesque thing 'out there' to behold. Instead, it is more commonly understood as 'land,' as in the materiality of the land as resource, as territory, as property, as physical obstacle or threat, and indeed, more holistically as climate, weather, and environmental condition. In such environments scale relationships alone, immediately evident to the casual observer, reg-

ister and precisely locate the proper proportion and place of human and natural processes. [11]

As a means of suggesting that landscape might be understood more as process than artifact we might look to the medieval Germanic term *Landschaft*. In contrast to the pictorial or visual emphasis of the sixteenth-century Dutch term *landskip*, *Landschaft* suggests an active tense in its connotation of social process. John B. Jackson, the historian of vernacular landscape, suggests that the component "land" once signified "a defined space, one with boundaries, but not necessarily one with fences or walls." [12] "Schaft" or "scape," he writes, "is essentially the same as *shape*, except that it once meant a composition of similar objects, as when we speak of a fellowship or membership . . . the word *scape* could also indicate something like an organization or system." [13] As landscape itself is inherently temporal, unfolding with and over time, it can be seen as constituting a social process, rather than as social product. The Germanic echoes held within this concept of 'landscape' offer a model for thinking landscape as more verb than noun.

Yet the image of landscape as an organization or system evokes a structuralist notion of landscape as artifact that can be understood through rational analysis of its various knowable parts. Thus, ultimately a more temporal image is necessary to account for a landscape approach to mobile media – something more fluid and process-oriented that suggests a becoming or unfolding, rather than a visual image (including the conventional notion of the picturesque, or the Dutch *landskip* or *landskap*) or fixed ontological entity expressed as a relatively stable social-spatial system (the positivist school of landscape that trace their foundations to the Germanic *Landschaft*). In contrast to architecture, for example, or the association of landscape with cartographic imagery, landscape is first and foremost the expression of biological and geo-

logic process. Thus, landscape must be understood as fundamentally defined by its biological form as physical processes unfolding in time. Complexity theory provides the basic reference for this emergent view of landscape. If we understand landscape as the complex interaction of subjects, technologies, and spaces produced through biological, social, neural, physical, and anthropological processes, then we suddenly find ourselves moving beyond the ocularcentrism of an art historical view or the historically positivist or structuralist reductions of social science. Mobile media, too, as I have argued above, are inherently more temporal and fluid than media environments tied to fixed or moving images on ubiquitous screens – media contexts that are explicitly designed to be used everywhere and nowhere in particular.

A process approach to landscape and mobile media can accommodate the heterogeneous scalar, temporal, material, biological, social, and cultural qualities that are suggested by the mobilities and subjectivities produced through and with mobile media. In this model, landscape as process can be seen as the ground from which mobile experience emerges as 'becomings' of heterogeneous sites, subjectivities, and materialities. Landscape and mobile experience are thus ultimately performative in the sense of action and participation of the subject, as well as biological and social processes.

Yet for all its rich potential, a landscape approach to mobile media must take an even more radical leap in order to embrace the fullness of a temporal and process-based model. The cultural term *locative media* or industry labels "location-aware" or "location-based" designs and services still suggest a location or position-bound model of space haunted by a latent Cartesianism. Other models of spatiality that acknowledge the shifting *relations* of bodies, sites, and subjectivities must be called upon in order to affect this conceptual

leap. Elsewhere I have articulated a similar 'space-time' of sound installation and mobile media; [14] however, in developing this notion more critically I have more recently looked to Deleuze and Guattari.

The writings of Deleuze and Guattari, with their emphasis on a temporally and materially articulated spatiality, lend themselves to imagining a project of "becoming" landscape. [15] The notion of *haecceity*, in particular, evokes this conception of space, as described by Mark Bonta and John Protevi:

> In [A Thousand Plateaus*], a body taken as a haecceity is defined in its cartography by its longitude (the "speeds and slowness" of its material flows) and by its latitude (its set of affects) (260–261). An environmental assemblage, a "set of relations" defined as a haecceity (382), treats spatio-temporal relations not as predicates of a thing (Aristotle's categories include "where" and "when") but as dimensions of multiplicities, components of the assemblage (262).* [16]

In addition to the notion of haecceity, the by now widely familiar concepts of "smooth" and "striated" space developed by Deleuze and Guattari (1988) offer a further image for thinking mobile media and space according to a temporal model. As just one example, the notion of smooth space as it pertains to the musical model implies a constant motion where there is continuous variation and continuous development of form, as opposed to striated space, which develops linearly and produces order and a succession of distinct forms. [17]

Additionally, drawing upon the concept of "becoming-animal" or "becoming-woman" as developed in *A Thousand Plateaus*, we might imagine a "becoming-landscape" where landscape ceases to be "other" in a binary opposition and is instead seen as an entangle-

ment of various forces, human and non-human, that are constantly in process of becoming one another, rather than existing as ontologically stable categories. Mobile media, and the mobilities they engender, make legible such spatialities and temporalities. Far from the romantic notion of landscape as a sweeping view, or the positivist or structuralist reduction of landscape to terrain or system, the image of landscape as spatial-temporal process reveals mobile experience and post-human mobilities as complex entanglements of bodies, materialities, temporalities, and subjectivities. Viewed from this perspective, locative media may be seen to challenge the totalizing view of GPS or surveillance technologies as the solely instrumental apparatus of control societies that would employ them as tools of oppression in the regulation of power and knowledge via language, code, and prosthetic agency.

DISPLACEMENTS

Places have agency; they work upon us as we work upon them. Discovering this agency and engaging it through shaping lively interactions between bodies and environments is fundamental to my practice. The feedback loops created in these exchanges effect displacements of various kinds. In thinking about how these displacements function at the level of mobility and perception, Maurice Merleau-Ponty's phenomenology emerges as a useful theoretical framework. [18] In this model the subject is seen as inextricably linked to environment as affect, climate, attitude, or mood. Emphasis on the kinesthetic foregrounds movement as fundamental to perception, from the smallest and most subtle movements of the body, to the tiniest shiftings of the gaze, the rise and fall of the breath, and the subtle response to vibrations felt as touch, sound, and other sensations. In locative media body, mind, and environment are entangled in the circum-ambient sphere of embodied kinesthetic perception,

as well as the physic-sensory realm. Here we might look to the work of Elizabeth Grosz [19] whose discussion of landscape places it squarely at the confluence of phenomenology and process philosophy, especially as articulated in the work of Straus as compared to Deleuze and Guattari (1988) – who by the time they published *A Thousand Plateaus* had departed significantly from the lineage of phenomenology and its emphasis on the subject of lived experience versus the neuro-physiological subject:

> Straus illustrates the distinction between perception and sensation in terms of the opposition between geography and landscape. Geography is the space of the map, that which is regulated by measurable coordinates, what Deleuze and Guattari refer to as striated or sedentary space, a space whose location or region is abstracted from its lived qualities. Landscape, by contrast is that space revealed by sensation, which has no fixed coordinates but transforms and moves as a body passes through it. [20]

In each of my works extensive interaction with sites unfolds through inviting participants to engage the simple act of walking. Both in making my work and experiencing it, walking is the ground from which each piece emerges. Through walking, responsive sounds, both ambient and composed, are coupled to the proprioceptive sensation of the participant's body in motion, giving rise to emergent invisible acoustic architectures that bind body and environment in a fluid feedback. Since the beginning I have used sound as the primary media overlay in my works, eschewing the screen in the interest of drawing the eye to the surrounding environment, as well as allowing the body to freely explore this novel spatiality.

I am intrigued by the aesthetic and kinesthetic qualities of GPS as a spatial medium and its capacity to

enhance and intensify the coupling of movement and meaning in site-specific works. Through sculpting sound to site, as if it were a garment made to fit the landscape, these works unfold as a series of shifting thresholds that blur physical and virtual, organism and environment, body and technology, sound, sight, and touch. Through slowing down and becoming sensitive to thresholds of site and signal as structured through spatialized sound, I hope that participants may begin to feel a reconfigured relationship of the body in space as mediated by mobile technologies. Ultimately my work is an inquiry into the transformation of perception, cognition, and consciousness as technologies reshape our sense of place, identity, and embodied interaction. Cultural identity then, becomes a central question as these couplings and entanglements become evident at the level of representation and mobile experience. Toward elaborating these colliding forces, I use examples from my own works created over the past decade.

The work itself

Forms and modes of displacement engaged in my practice express differently in each work, but all of them bring the body into tightly coupled dialogue with the physical contours of a site, as well as the social, cultural, and historic continuities and contradictions inherent to sites as processes in time.

Drift (2004) is a site-specific responsive sound environment set along the tidal flats of the Wadden Sea in Northern Germany. [21] Visitors are provided with headphones connected to small computers equipped with GPS and custom movement tracking software. As they explore the environment of the tidal flats, sounds play in response to their movement through regions of sound that drift with the tides. Absolute position and relative movement are explored as visitors discover they may experience this work by simply standing still, allowing the drifting sound regions to "wash" over them in time.

With *Drift*, displacement occurs in multiple domains. Sound regions are displaced with the tides, the body becomes displaced in an isomorphic landscape of shifting sand, water, wind, and signal, and awareness of nineteenth-century navigation techniques (line of sight as in landmarks, sonic beacons, etc.) blend with the direct engagement and encounter with contemporary technologies including radar, GPS, and GIS. Despite the presence and ubiquity of these artifacts of orientation and navigation, however, displacements of spatial awareness and general orientation in an interactive system occur as participants wander through a seascape unaided by the grounding visual and textual cues of locational technologies such as maps and GPS coordinate output. This short-circuiting of participants' expectations when using locative media frustrates goal-oriented or efficiency-driven modes of navigation and interaction.

As location-aware technologies and conventional modes of geospatial representation (e.g., Google Earth, GIS, etc.) became more commonly available in the early 2000s, they began to reshape everyday methods and modes of navigation and related spatial perceptions. *Drift* was an attempt to call our attention to these cultural transformations through direct physical engagement with the media in a mode of interaction that ran "against the grain" of these same popular media forms and navigation technologies.

With *Core Sample* (2007) I sought to evoke another kind of displacement. 22 On one level, the work was intended to evoke an imaginary displacement of the body through the layers of a metaphoric core sample corresponding to the material history of the site. On another level, the site itself – an island long used as a dump by the city of Boston, Massachusetts – became the symbol of a displacement in the form of the abject or suppressed. As a marginal space, or waste landscape, Spectacle Island was long reviled as an eyesore known for its putrid smell, and toxic emissions of methane and leachate.

Figure 2. *Core Sample*, Teri Rueb, 2007. Visitors in the gallery (left), walkers on the island (right). Sculpture created with Michelle Fornabai. © Teri Rueb, 2007. Used with permission.

The project was born of the question, "How can we come to terms with our own role and place within processes of consumption, waste, and eventually reclamation, not through endless elaboration of the problem, but instead through an experiential encounter in which we feel both physically and symbolically implicated in and empathic to the very ground beneath our feet?" Formally I wondered, "What kinds of relationships to landscape might emerge if one could sink through the earth and *become* the layers of sediment that make up this reclaimed landfill?"

I attempted to create this effect through presenting participants with a layered sound composition that changed as they moved across the shifting elevations of the island, suggesting a metaphoric core sample. Spectacle Island is in large part made up of garbage – over thirty-meter cliffs of garbage in some places – as well as excavation from the Big Dig tunnel project that in some places reaches thicknesses of up to eighteen meters. The island used to be an open landfill where spontaneous methane fires burned out of control, lighting up the night sky.

The island now stands as a showcase for promising and progressive techniques of waste management and landscape remediation, cloaked in the image of a pastoral plain. A completely engineered landscape, Spectacle Island was capped with excavation and completely landscaped with a scientifically formulated loam designed to support over 28,000 imported plants, trees, and shrubs that make up its current park-like facade.

Core Sample sought to reveal these radical physical, cultural, and psychological displacements, as well as evoke more subtle displacements as participants wandered the island and were immersed in sounds that evoked these materialities as well as the island's cultural history and possible futures. Sounds of garbage,

leachate and escaping gases, and radio astronomy transmissions mix with the voices of past residents of the island who describe their experiences growing up on this island or working in its many industries. Over 250 sounds were combined with the voices of landfill technology experts and botanists who study the vibrant and remediating potentials of the botany of disturbed landscapes. Each sound was carefully composed and located in space such that specific elevations and transitions between elevations expressed a sonic stratigraphy of cultural, social, and material history as registered against a metaphoric core sample. In this way the project sought not only to displace participants' sensory and perceptual experience of the island as a material site, but also to displace them in the multiple temporalities and subjectivities suggested by this incredibly lively and resilient landscape.

Elsewhere : Anderswo (2009) brings the theme of displacement to the fore through embracing the cultural disorientations and disjunctions that are often felt when traveling to foreign places that confront us with the uncanny experience of being "outsider" to local custom and context. 23 Set across two sites, the project engaged local displacements, as well, as viewers might hear similar sounds – both ambient and recorded – repeated across the two locations. Separated by approximately 100 kilometers, the corresponding installations set in Oldenburg and Neuenkirchen function dialogically as sites punctuated with a patchwork of appropriated audio from popular films, radio, and television that evoke familiar landscape references to both German and American audiences.

The last work I will discuss is perhaps the most complex in terms of addressing themes of displacement. *No Places with Names: A Critical Acoustic Archaeology* (2012) brings the question of displacement in mobile media to the fore as it explores the concept of "wilderness" as its meaning shifts across cultural

Figure 3. *Elsewhere : Anderswo*, Teri Rueb, 2009. Walker in the botanical garden. © Teri Rueb, 2009. Used with permission.

ologies that often had the impact of displacing people and natural habitats in the name of 'progress.'

Thus, to ask the question, "What does wilderness mean to you?" in these interviews and to present the fragmented narratives that emerged in response to this question in locations that have historically typified the cultural imaginary of 'wilderness' effects an odd kind of double operation of displacement. In most cases interviewees responded that the word held little meaning as it was seen to create false binaries of nature and culture, or was seen to have deliberate connotations of erasing the 15,000 year history of indigenous habitation of the area prior to colonization. Some interviewees saw environmental groups and government agencies misuse the word in the interest

of reappropriating ranch and farm land to 'preserve' it as designated 'wilderness' areas. These are only a few of many different responses that became the sonic fabric of the final work which was presented in situ as a site-specific sound walk on the campus of the Institute of American Indian Arts, itself a parcel with a long history of having been used for grazing, short-term habitation, and, more recently, suburban development, including the campus itself. Each of these historical moments was marked by displacements of native peoples, plants, and watersheds and ultimately the reclaiming of the site from cattle grazing uses to the reconsecration of it as the site of an institute dedicated to the advancement of native arts. Onto this palimpsest of spatial and social displacements the piece *No Places With Names* introduces yet another layer

and historical contexts. [24] The work was created in collaboration with local artists Larry Phan (first generation Vietnamese-American) and Carmelita Topaha (Navajo) and included interviews with over thirty-five local residents of the Santa Fe area in New Mexico including artists, farmers, and scientists, acequia majordomos, arts writers, and activists. Nearly a third of the interviewees were members of over a dozen different Native Americans tribes from all over North America. The project itself was sited on the campus of the Institute of American Indian Arts, just south of Santa Fe, New Mexico.

The piece was developed over an eighteen-month period of residency in New Mexico and while it deeply engaged local sites and communities, the primary audience is often a tourist or short-term visitor to this highly trafficked travel destination, bringing another dimension of displacement and mobility to the work.

The question of wilderness in the cultural context of the Southwestern United States is first and foremost one of displacement. The Southwest is home to one of the densest populations of contemporary Native Americans living on and off reservations and in this context they live alongside significant populations of descendants of Spanish colonial settlers dating back nearly 400 years. This mix is complemented by modern and contemporary waves of immigration to the area including members of the scientific elite in the 1940s and 1950s at Los Alamos Labs and counterculture radicals of the 1960s and 1970s. This cultural milieu makes the Southwest an especially charged environment in which to raise questions regarding the notion of wilderness, an idea that has historically been invoked to promote religious, environmental, and colonial agendas since the earliest colonial period in the Americas. The idea of wilderness as the place of no people, a pristine refuge, or a natural resource that must be preserved are all reflections of contested ide-

Figure 4. *No Places with Names*, Teri Rueb and Larry Phan with contributions from Carmelita Topaha (Diné), 2012. Walker holding sculpture. © Teri Rueb, 2012. Used with permission.

of displacement in inviting people, most of whom will be visitors or 'outsiders' to the campus community, to walk the trails and reflect on the complex spatial and social ramifications of landscape imaginaries, including the virtual overlay of the mobile sound walk itself – an art form that while readily embraced by students and faculty, is still nevertheless considered a distinctly un-conventional or alien art form in this context.

In closing, it should be said that while I certainly re-main an outsider to indigenous and Nuevo Mexicano cultures, it was clear to me that among the important differences in their world views regarding landscape was the sense that landscape is produced through cultural action and use in both cultures. For indigenous peoples this is intrinsically tied to their oral history, ori-gin stories, and moral code. Like Australian aboriginal songlines, Native Americans have elaborate stories that are tied to landforms and itineraries connecting landforms. It is believed that actually visiting those sites reveals those stories and renews their power as catalysts in organizing human society and its balance with nature. Bruce Chatwin (1988), Keith Basso (1996) and Steven Feld (Feld and Basso 1997) have all written works that have illuminated these various cultures and their conceptions of space, place, and landscape from the perspective of situated ethnography. 25 While their works have profoundly influenced my practice since 1996, I had an even more powerful encounter recently as I lived in New Mexico for a year and had the privilege of collaborating on a project with ceramicists Carmelita Topaha (Diné) and Larry Phan, a first gen-eration Vietnamese-American, both of whom lived in Farmington, New Mexico. This experience has left me both grateful for the deeper perspectives gained, and humble at the thought of speaking with any authority about these cultures which I now appreciate as even more complex and elusive to my understanding than I ever imagined. Nevertheless, I will try to evoke some-thing of their significance to my argument.

Distinctions of nature and culture are much more blurry in the cosmology of Native American cultures, perhaps suggesting a model of 'becoming-animal' or 'becoming-landscape.' For Nuevo Mexicanos landscape seems to be understood in relation to cultivation and sustenance. Rather than thinking of distinct catego-ries of 'wilderness' and 'civilization,' their world view

sees the land as a resource that must be managed collectively as a framework for governance. In fact the acequia, or irrigation ditch systems, they brought to the new world from Spain define a unique social contract organized around a shared resource. To this day, the acequia 'majordomo' holds an important role in overseeing the relationship between people, re-sources, and the law. The majordomo is much more than a symbolic leader. He or she is tied to the land and to the watershed as a manifestation of another order, that of nature and the precious resources provided by nature to sustain a people. In the harsh desert climate of the Southwest, water is everything. It defines the relationship between people and the environment at the most profound level. Take for ex-ample the fact that Hopi way of life is so intrinsically defined by the need to supplicate the spirits or 'kachi-nas' in the interest of calling forth rain to sustain crops the even artesian water on Hopi land (discovered in modern times) is still not drawn upon as a resource to water crops. These rumination are certainly limited in their understanding of Native American and Nuevo Mexicano ways, but still I find in them the promise of a fruitful way to think landscape newly as a 'becoming land' – even a 'becoming-environment.' Perhaps this constant becoming – a constant displacement – holds a way forward and an opportunity to deeply rethink our responsibility in relation to environmental crisis.

CONCLUSION

Much more might be said about the various displace-ments effected by this final work, but in conclusion I would like to invoke the overarching displacements that have become apparent to me over the past fif-teen years of creating works in locative media. There is a reductionist function of GPS and location-sensing technologies and interfaces that would represent us as tiny dots moving about the flattened plane of an abstract projection of three-dimensional space. In our entanglements with these technologies we are simul-taneously in a first and third person subject position – registering our presence 'here,' but from a position outside our corporeal being.

Similarly, yet in a different historical moment, seeing the image of the Earth from outer space represented

a kind of mirror stage in human consciousness akin to the emergence and proliferation of Google Earth and Google Maps as commonplace modes of representa-tion and enaction of our daily 'here-ness' and mobility. I often wonder what the equivalent auditory moment is to the visual mirror stage described by Lacan. What would a sonic 'mirror stage' be that precedes the vi-sual as we hear acutely even when we are still in the womb, our eyes sealed? How does this sonic sense of proprioception relate to our proprioceptive awareness of here-ness as thrown back on us in a double first per-son/third person coordinate reference translated as dot on a Cartesian map, the cognitive awareness that haunts nearly every moment of our interface with lo-cation-sensing technologies? Perhaps more disturbing, especially as it lingers even deeper in our subconscious awareness, is the fact that this image holds within it the sense of a self moving in relation to the planet(s) – a movement that is sensed by satellites that are them-selves moving in relation to the planet(s). The scale and significance seems nothing short of the intimate immensity that Blake speaks of when he describes seeing the world in a grain of sand, and holding infinity in the palm of your hand. A strange new 'unhomeliness' seems to characterize the current moment of 'i-' and 'my-' everything, intensified by mobile technologies that suggest that anything we desire is magically at the tip of our fingers, under our thumbs, or already in the palm of our hands. But these new formulations are intrinsically complicated by the fact of their temporal scale – one in which constant fluctuations and move-ment force us to understand our existence as more motion than stasis, more fluctuation than consistency, more indeterminate than determinate. In this state of constant (dis)orientation, how can we find a reference point against which to define ourselves and the places that define us? I would argue that the very desire for such fixity is an unnecessary source of frustration. If we could find our peace in the current, the flow, the constant change, we might be released from the fic-tion of fixity which leads us to think of subjectivity as objective, unchanging, constant, and consistent – in-deed this false image underlies the hegemonic logics that fuel racism, sexism, species-ism, and countless other instances of exploitation and a mistaken sense of superiority. Designing for a constantly shifting point of view that challenges the centrality of any singular subject position may lead us to embrace our mobile

subjectivity as a form of productive displacement. A decentering that engenders landscapes of becoming in which radical subjectivities may be realized within and across human and non-human domains. ∎

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11. This distinction between "landscape" and "land" as marking perceptions of East Coast versus Western cultures in the United States emerged in conversation with Lucy Lippard during an interview I conducted with her on May 25, 2012.

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17. Ibid., 41; see their useful glossary of Deleuze and Guattari's terminology.

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19. I have drawn heavily upon Elizabeth Grosz's reading of Deleuze and Guattari in her 2008 work *Chaos, Art, Territory: Deleuze and the Framing of the Earth* because in it she interprets their ideas in architectural terms and with respect to art in a much more spatially oriented analysis than even Deleuze and Guattari, whose references to art tend toward music and painting. Furthermore, the reference to Straus is a unique linkage of phenomenology and process philosophy – a contribution that Grosz is making in drawing the two together around an analysis of "geography" versus "landscape." The integrity of her contribution is, I believe, maintained in quoting her, rather than reconstructing the analysis through a re-reading and recontextualizing of the original texts only to produce a juxtaposition that was initially made by Grosz herself. Elizabeth Grosz, *Chaos, Art, Territory: Deleuze and the Framing of the Earth* (New York: Columbia University Press, 2008).

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