

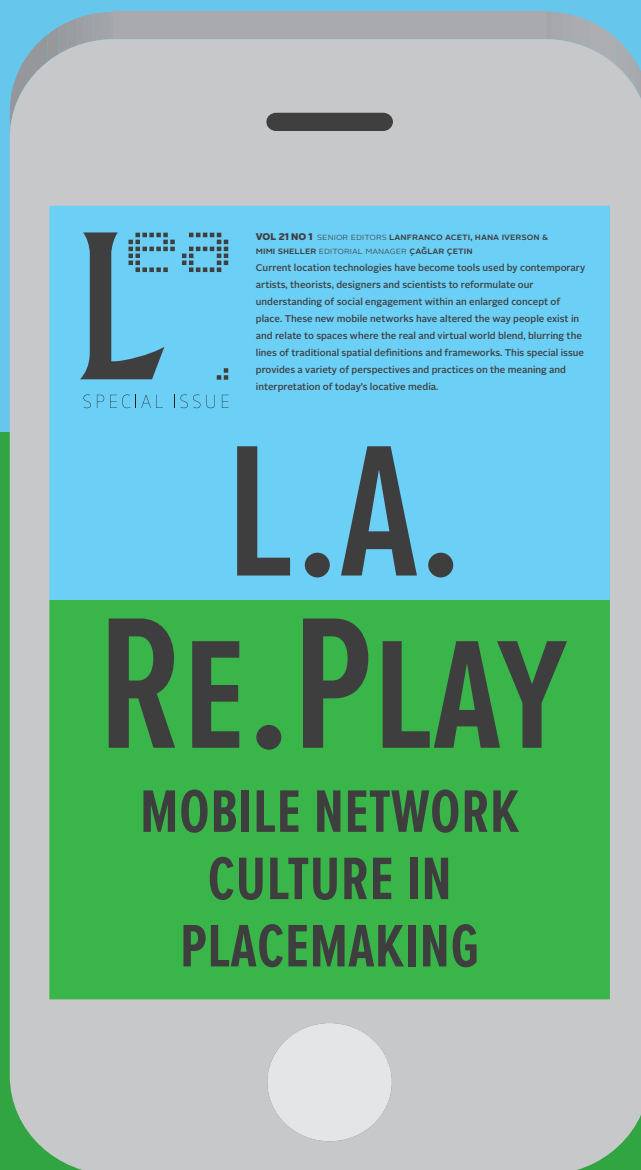
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### SPECIAL ISSUE

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

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



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

LEONARDO ELECTRONIC ALMANAC, VOLUME 21 ISSUE 1

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

SENIOR EDITORS

**LANFRANCO ACETI, HANA IVERSON AND MIMI SELLER**

EDITORIAL MANAGER

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Leonardo Electronic Almanac  
Volume 21 Issue 1

- 10 EDITORIAL Lanfranco Aceti
- 14 EDITORIAL Mimi Sheller & Hana Iverson
- 28 OPERATION FAUST Y FURIOSO: A TRANS [ ] BORDER PLAY ON THE REDISTRIBUTION OF THE SENSIBLE  
Electronic Disturbance Theater 2.0/b.a.n.g. lab
- 44 SOUND CARTOGRAPHIES AND NAVIGATION ART: IN SEARCH OF THE SUBLIME  
Ksenia Fedorova
- 60 EMERGENT TECHNOLOGY AS ART PRACTICE AND PUBLIC ART AS INTERVENTION  
John Craig Freeman
- 72 CITY... CREATIVITY... AND MEASURE...  
Jeremy Hight
- 76 NARRATIVE IN HYBRID MOBILE ENVIRONMENTS  
Martha Ladly
- 96 AN INTERVIEW WITH JENNY MARKETOU  
Mimi Sheller & Hana Iverson
- 110 INDETERMINATE HIKES +: ECOLOGICAL AWARENESS AND THE MOBILE LANDSCAPE  
Leila Christine Nadir & Cary Peppermint
- 124 VISITING GOOGLE EARTH: GPS ART AND SUBJECTIVE CARTOGRAPHY  
Esther Polak & Ivar van Bekkum
- 130 I-5 PASSING ... 2002-2007  
Christiane Robbins & Katherine Lambert

- 140 THE BODY IMAGE: BODY SPATIALITY IN MOBILE AUGMENTED REALITY PROJECTS  
Sarah Drury
- 148 'EN ROUTE' AND 'PASTCITYFUTURE': MAKING PLACES, HERE AND THERE, NOW AND WHEN  
Ian Woodcock
- 160 MORE THAN JUST A PINPOINT: LOCATIVE MEDIA AND THE CHOROGRAPHIC IMPULSE  
Kim Sawchuk & Samuel Thulin
- 178 LOCATIVE AWARENESS: A MOBILITIES APPROACH TO LOCATIVE ART  
Jen Southern
- 196 OBJECTS AS AUDIENCE: PHENOMENOLOGIES OF VIBRANT MATERIALITY IN LOCATIVE ART  
Jason Farman
- 210 ELASTIC GEOGRAPHIES: LIVING IN THE PROXIMITY OF ELSEWHERE  
Paula Levine
- 220 RESTLESS: LOCATIVE MEDIA AS GENERATIVE DISPLACEMENT  
Teri Rueb
- 236 HYPERALLERGIC INTERVIEW: RICARDO DOMINGUEZ TALKS ABOUT THE TRANSBORDER IMMIGRANT TOOL WITH LEILA NADIR

# 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.*<sup>1</sup>

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,<sup>2</sup> 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.<sup>3</sup>

"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."<sup>4</sup>

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

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

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

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

In sociopolitical and philosophical terms, this analysis provides the opportunity to perceive life as being

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

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

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

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

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

This LEA special issue is a survey that explores and aims to understand the sociopolitical possibilities of

contemporary art, and that delves into the realm of location and its contexts.

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

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

**Lanfranco Aceti**

Editor in Chief, *Leonardo Electronic Almanac*  
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#### REFERENCES AND NOTES

1. Drew Hemment, "Locative Media," *Leonardo Electronic Almanac, Locative Media Special Issue* 14, no. 3 (July, 2006), [http://leoalmanac.org/journal/vol\\_14/lea\\_v14\\_n03-04/guested.asp](http://leoalmanac.org/journal/vol_14/lea_v14_n03-04/guested.asp) (accessed May 20, 2015).
2. Kareem Shaheen "Erdoğan's 'Gollum Insult' a Mistake, Says Lord of the Rings Director," *The Guardian*, December 3, 2015, <http://www.theguardian.com/world/2015/dec/03/lord-of-rings-director-insult-to-erdogan-mistake-as-gollum-as-character-is> (accessed December 4, 2015).
3. I would like to thank Mark Skwarek, John Craig Freeman, Will Pappenheimer and Tamiko Thiel for exhibiting with the Museum of Contemporary Cuts in Istanbul and with Kasa Gallery, <http://www.lanfrancoaceti.com/2013/10/i-occupy/>. In particular Will Pappenheimer placed a large cloud writing with the text 'Why I Occupy' over Gezi Park in Taksim Square, Istanbul. The artwork is still visible and was part of a series of events linked to the panels discussion held at Kasa Gallery titled Making Visible the Invisible: Media, Art, Democracy and Protest.
4. Constanze Letsch, "Social Media and Opposition to Blame for Protests, Says Turkish PM," *The Guardian*, June 3, 2013, <http://www.theguardian.com/world/2013/jun/02/turkish-protesters-control-istanbul-square> (accessed May 20, 2015).
5. "Adding Injustice to Injury: One Year on from the Gezi Park Protests in Turkey," *Amnesty International*, June 2014, [https://www.amnesty.nl/sites/default/files/public/final\\_en\\_30\\_may\\_2014.pdf](https://www.amnesty.nl/sites/default/files/public/final_en_30_may_2014.pdf) (accessed May 20, 2015). Also: Amnesty International, "Turkey: Move to block YouTube ahead of elections points to growing censorship," *Amnesty International*, March 27, 2014, <http://www.amnesty.org/en/for-media/press-releases/turkey-move-block-youtube-ahead-elections-points-growing-censorship-2014-03> (accessed May 20, 2015) and "Turkey: Pre-election Twitter shutdown brings internet freedom to a new low," *Amnesty International*, 21 March 21, 2014, <http://www.amnesty.org/en/news/turkey-pre-election-twitter-shutdown-brings-internet-freedom-new-low-2014-03-21> (accessed May 20, 2015).
6. Hans Sluga, *Politics and the Search for the Common Good* (Cambridge: Cambridge University Press, 2014), 191.
7. Conor McGarrigle, "The Construction of Locative Situations: Locative Media and the Situationist International, Recuperation or Redux?," *Digital Creativity* 21, no. 1 (2010): 56.
8. Ibid., 57-58.
9. Hana Iverson and Mimi Sheller, "L.A. RePlay: Mobile Network Culture in Placemaking," *Leonardo Electronic Almanac* 21, no. 1 (2016).



# 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.<sup>1 2 3 4</sup> 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,”<sup>5</sup> drawing on Tim Cresswell's studies of being “on the move,”<sup>6</sup> Larissa Hjorth's work on “mobile intimacy,”<sup>7</sup> Tim Ingold's idea of “ambulatory knowing,”<sup>8</sup> and Ingrid Richardson's work on interactive media and forms of “visceral awareness,”<sup>9</sup> 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.<sup>10 11 12</sup> 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.”<sup>13</sup>*

Given the significance of artists in the debates about mobile locative media<sup>14 15</sup> (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.”<sup>16</sup> 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”?<sup>17</sup> 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 smart-

phones) 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.”<sup>18</sup> 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.”<sup>19</sup> 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.<sup>20</sup> [..] 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.<sup>21</sup>*

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.”<sup>22</sup> 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.<sup>23</sup>

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.”<sup>24</sup> There are many ways of moving with and through “virtual” media that when coupled with narrative and stories seek to re-enchant the disenchanting 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”<sup>25</sup> 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.<sup>26</sup>

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.<sup>27</sup> 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.<sup>28</sup>

#### 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”<sup>29</sup> 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<sup>30</sup> – are accomplished in motion, just as the artworks exploring 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,<sup>31</sup> “networked place,”<sup>32</sup> or “hybrid space.”<sup>33</sup> 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.”<sup>34</sup> 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).<sup>35</sup>

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.”<sup>36</sup> 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 Francisco*↔*Baghdad* (2004). Or the materiality of digital media might involve adapting to weather, noise, and gestures within a kinaesthetic field, even as one follows an abstract GPS coordinate depicted as a blinking dot on a screen, as Sawchuk and Thulin explore in their analysis of works like *Lost Rivers* and *Montreal in/accessible*, and contributor Jen Southern explores in works such as *CoMob*.

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

*This mobile app imports the rhetoric of wilderness into virtually any place accessible by Google Maps, creates hikes, and encourages its hiker-participants to treat the locales they encounter as spaces worthy of the attention accorded to sublime landscapes, such as canyons and gorges. Thus the ecological wonder usually associated with “natural” spaces, such as national parks, is re-appropriated*

*here to renew awareness of the often-disregarded spaces in our culture that also need attention, such as alleyways, highways, and garbage dumps. This project extends ecological awareness into mobile spaces, into the places humans actually live, democratizing conversations about environmental sustainability and ecological management that too often occur only in a scientific context.*

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

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

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

Participants in soundwalks can experience an embodied engagement with place and, in some cases, a re-mediated performance of everyday actions that reorganize the experience of space and time. This type of work is situated in the embodied sensory experience of landscape, but also lends itself to collective sound-mapping and the production of new mixed-reality soundscapes and mobile acoustic ecologies. Ross Gibson notes that “The rhythms with which and within which a person can *perceive*: the time spans in which we sense our acuity, these time spans are becoming ever more elastic.”<sup>37</sup> 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)<sup>38</sup> 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.”<sup>39</sup> 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.<sup>40</sup> 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,”<sup>41</sup> 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.”<sup>42</sup> “Motion and emotion” are “kinaesthetically intertwined and produced together through a conjunction of bodies, technologies, and cultural practices.”<sup>43</sup> The choreographies 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.”<sup>44</sup> While the notion of counter-publics has a long history<sup>45</sup> 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.<sup>46</sup> 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.”<sup>47</sup> 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.<sup>48</sup> 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.”<sup>49</sup> Mobile augmented reality opens up our perception and bodily experience of the spaces through which we move, allowing the materialities and performativities 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.<sup>50</sup> 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.<sup>51</sup>

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.<sup>52</sup>

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.”<sup>53</sup> 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.<sup>54</sup> 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.

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#### REFERENCES AND NOTES

1. Rowan Wilken and Gerard Goggin, eds., *Mobile Technology and Place* (London: Routledge, 2012); and Rowan Wilken and Gerard Goggin, eds., *Locative Media* (London: Routledge, 2014).
2. Adriana De Souza e Silva and Jordan Frith, *Mobile Interfaces in Public Spaces: Locational Privacy, Control and Urban Sociability* (London and New York: Routledge, 2012); and Adriana De Souza e Silva and Mimi Sheller, eds., *Mobility and Locative Media: Mobile Communication in Hybrid Spaces* (London and New York: Routledge, 2015).
3. Gerard Goggin and Larissa Hjorth, eds., *The Routledge Companion to Mobile Media* (New York: Routledge, 2014).
4. Rowan Wilken, “Mobile Media, Place and Location,” in *The Routledge Companion to Mobile Media*, ed. Gerard Goggin and Larissa Hjorth (New York: Routledge, 2014), 514-527.
5. Rowan Wilken, “Mobile Media, Place and Location,” in *The Routledge Companion to Mobile Media*, ed. Gerard Goggin and Larissa Hjorth, 516 (New York: Routledge, 2014).
6. Tim Cresswell, *On the Move: Mobility in the Western World* (London: Routledge, 2006).
7. Larissa Hjorth, “Still Mobile: A Case Study on Mobility, Home, and Being Away in Shanghai,” in *Mobile Technology and Place*, ed. Rowan Wilken and Gerard Goggin (New York: Routledge, 2012).
8. Tim Ingold, *The Perception of the Environment: Essays in Livelihood, Dwelling and Skill* (London: Routledge, 2000).
9. Ingrid Richardson, “Pocket Technospaces: The Bodily Incorporation of Mobile Media” in *Mobile Technology and Place*, ed. Rowan Wilken and Gerard Goggin (New York: Routledge, 2008), 66-76.
10. Christiane Paul, *Digital Art*, Revised & Expanded (London: Thames & Hudson, 2008); and Christiane Paul, ed., *New Media in the White Cube and Beyond: Curatorial Models for Digital Art* (Berkeley, CA: University of California Press, 2008).
11. Ulrik Ekmann, ed., *Throughout: Art and Culture Emerging with Ubiquitous Computing* (Cambridge, MA: MIT Press, 2012).
12. Claire Bishop, “Digital Divide,” *Artforum* 51, no. 1 (2012): 435-441.
13. Christiane Paul, “Contexts as Moving Targets: Locative Media Art and the Shifting Ground of Context Awareness,” in *Throughout: Art and Culture Emerging with Ubiquitous Computing*, ed. Ulrik Ekmann (Cambridge, MA: MIT Press, 2012), 14.
14. Eric Gordon and Adriana de Souza e Silva, *Net Locality: Why Location Matters in a Networked World* (Chichester, England: Wiley-Blackwell, 2011).
15. Adriana De Souza e Silva and Mimi Sheller, *Mobility and Locative Media*.
16. Ross Gibson, “The Time Will Come When...,” in *Future Cinema: The Cinematic Imaginary after Film*, ed. Jeffrey Shaw and Peter Weibel (Cambridge, MA: MIT Press, 2002), 570.
17. In the 50th anniversary issue of *Art Forum*, which focused on new media art, influential art critic Claire Bishop asks “Whatever happened to digital art? While many artists use digital technology, how many really confront the question of what it means to think, see, and filter affect through the digital? How many thematize this, or reflect deeply on how we experience, and are altered by, the digitization of our existence? I find it strange that I can count on one hand the works of art that do seem to undertake this task.” [Claire Bishop, “Digital Divide,” *Artforum* 51, no. 1 (2012): 436.]
18. Beryl Graham and Sarah Cook, *ReThinking Curating: Art after New Media* (Cambridge, MA: Leonardo Books / MIT Press, 2010).
19. Umberto Eco, *The Open Work [Opera aperta]*, trans. Anna Cancogni (Cambridge, MA: Harvard University Press, 1989).
20. Nato Thompson, “Tactical Urbanism 2,” Streets Plan Collaborative, [http://issuu.com/streetplanscollaborative/docs/tactical\\_urbanism\\_vol\\_2\\_final?e=4528751/2585800](http://issuu.com/streetplanscollaborative/docs/tactical_urbanism_vol_2_final?e=4528751/2585800) (accessed October 10, 2014).
21. Mimi Zeiger, “The Interventionist’s Toolkit: 4,” *Places Journal*, March 2012, <https://placesjournal.org/article/the-interventionists-toolkit-project-map-occupy/> (accessed October 10, 2014).
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.
23. Mobile gaming combines GPS with Bluetooth short range data exchange, WiFi wireless internet, SMS short messaging service and cell networks and has emerged alongside locative art as an experimentation with urban public space via forms of “radical play” inspired by Situationist practices and ideas like the “derive” and unitary urbanism. See Sophia Drakopoulou, “A Moment of Experimentation: Spatial Practice and Representation of Space as Narrative Elements in Location-based Games,” *Aether: Journal of Media Geography* 5A (2010): 63-76; and Adriana De Souza e Silva and Daniel M. Sutko, eds., *Digital Cityscapes: Merging Digital and Urban Playspaces* (New York: Peter Lang, 2009).
  24. Siobhan O’Flynn, “Nuit Blanche and Transformational Publics,” in “Civic Spectacle,” ed. Jim Drobnick and Jennifer Fisher, special issue, *Public* 23, no. 45 (2012), 28-45.
  25. Mark Shepard, ed., *Sentient City* (Cambridge, MA: MIT Press, 2011).
  26. “Rider Spoke” (2007) is a mobile game for urban cyclists, designed by the British collective, Blast Theory. The idea is to combine theater with cycling and mobile game play in a public urban environment. Cycling through the streets at night, equipped with a mobile attached to the handlebars, participants find a hiding place to record a short message in response to a question posed, and then search for the hiding places of other participants’ messages. “Rider Spoke” was created in October 2007 in London, and has been shown and played in Brighton, Athens, Budapest, Sydney, and Adelaide. Their ideas of immersive theater and interactive art were developed further in another hybrid mobile gaming project, “You Get Me” (2008), and later “I’d Hide You” (2012) launched at the FutureEverything Festival 2012 in Manchester. Participants logged in online to join a team of runners live from the streets of Manchester and saw the world through their eyes as they stream video, while playing a game of team tag.
  27. Arjun Appadurai, *Modernity at Large: Cultural Dimensions of Globalization* (Minneapolis, MN: University of Minnesota Press, 1996).
  28. Eric Gordon and Adriana de Souza e Silva, *Net Locality*; and Adriana De Souza e Silva and Mimi Sheller, *Mobility and Locative Media*.
  29. Adriana De Souza e Silva and Mimi Sheller, *Mobility and Locative Media*.
  30. Mimi Sheller explores the idea of “mobile mediality” in the essay “Mobile Mediality: Locations, Dislocations, Augmentation,” in *New Mobilities Regimes in Art and Social Sciences*, ed. Suzanne Witzgall, Gerlinde Vogl, and Sven Kesselring (Aldershot, England: Ashgate, 2013), 309-326, arguing that “Locative art and mobile gaming are two of the arenas in which such emergent remediations are being explored, as old media recirculate via new media into alternative networked spaces” and this is connected to “a hypermediation of streets, urban space, public and private places, and gaming practices” (p. 312). See also Mimi Sheller, “Mobile Art: Out of Your Pocket,” in *The Routledge Companion to Mobile Media*, ed. Gerard Goggin and Larissa Hjorth (London: Routledge, 2014), 197-205.
  31. Jay Bolter and Robert Grusin, *Remediation: Understanding the New Media* (Cambridge, MA: MIT Press, 1999).
  32. Kazys Varnelis and Anne Friedberg, “Place: Networked Place,” introduction to *Networked Publics*, ed. Kazys Varnelis (Cambridge, MA: MIT Press, 2006), <http://networked-publics.org/book/place.html> (accessed October 10, 2014).
  33. Adriana De Souza e Silva and Daniel M. Sutko, *Digital Cityscapes*.
  34. Adriana De Souza e Silva, “From Cyber to Hybrid: Mobile Technologies as Interfaces of Hybrid Spaces,” *Space and Culture* 9, no. 3 (2006): 261-278.
  35. Jay Bolter and Richard Grusin, *Remediation*.
  36. Elizabeth Grosz, quoted in Jason Farman, *Mobile Interface Theory: Embodied Space and Locative Media* (London and New York: Routledge, 2012), 36.
  37. Ross Gibson, “The Time Will Come When...,” 571.
  38. Henri Lefebvre, *Rhythmanalysis: Space, Time and Everyday Life* (London: Verso, 2004).
  39. Tim Edensor, “Commuter: Mobility, Rhythm, Commuting,” in *Geographies of Mobilities: Practices, Spaces, Subjects*, ed. Tim Cresswell and Peter Merriman, (Farnham and Burlington, VT: Ashgate, 2011), 189-204.
  40. Tim Edensor, ed., “Introduction: Thinking about Rhythm and Space,” in *Geographies of Rhythm* (Aldershot, England: Ashgate, 2010).
  41. Nigel Thrift, “Movement-space: The Changing Domain of Thinking Resulting from the Development of New Kinds of Spatial Awareness,” *Economy & Society* 33, no. 4 (2004): 582-604.
  42. Phil Macnaghten and John Urry, “Bodies in the Woods,” *Body and Society* 6, nos. 3-4 (2000): 169.
  43. Mimi Sheller, “Mobile Publics: Beyond the Network Perspective,” *Environment and Planning D: Society and Space* 22, no. 1 (2004): 39-52.
  44. Simon Sheikh, “In the Place of the Public Sphere? Or the World in Fragments,” *republicart*, June 2004, [www.republicart.net/disc/publicum/sheikh03\\_en.htm](http://www.republicart.net/disc/publicum/sheikh03_en.htm) (accessed October 9, 2014).
  45. Mustafa Emirbayer and Mimi Sheller, “Publics in History,” *Theory and Society* 28, no. 1 (1999): 145-197.
  46. Mimi Sheller and John Urry, “Mobile Transformations of ‘Public’ and ‘Private’ Life,” *Theory, Culture and Society* 20, no. 3 (2003): 107-125.
  47. Simon Sheikh, “In the Place of the Public Sphere? Or the World in Fragments.”
  48. Elizabeth Grosz, *Architecture from the Outside: Essays on Virtual and Real Space* (Cambridge, MA: MIT Press, 2001).
  49. Peter Merriman, “Roads: Lawrence Halprin, Modern Dance and the American Freeway Landscape,” in *Geographies of Mobilities: Practices, Spaces, Subjects*, ed. Tim Cresswell and Peter Merriman (Farnham and Burlington, VT: Ashgate, 2011), 99.
  50. Adriana De Souza e Silva and Jordan Frith, *Mobile Interfaces*.
  51. Adriana De Souza e Silva and Mimi Sheller, *Mobility and Locative Media*.
  52. As described by Ricardo Dominguez in an oral presentation during the *L.A. Re.Play* event at the Art Center College of Design, January 2012.
  53. Fernanda Duarte, “Rerouting Borders: Politics of Mobility and the Transborder Immigrant Tool,” in *Mobility and Locative Media: Mobile Communication in Hybrid Spaces*, ed. Adriana de Souza e Silva and Mimi Sheller (London and New York: Routledge, 2014), 79.
  54. Hana Iverson and Ricki Sanders, “The Neighborhood Narratives Project: New Dialogues with/in the Mediated City,” in *Media City: Situations, Practices and Encounters*, ed. Frank Eckardt et al. (Berlin: Frank & Timme, 2008), 153.

# Emergent Technology as Art Practice and Public Art as Intervention

by

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## INTRODUCTION

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. Public discourse has been relocated to a novel space; a virtual space 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

**Figure 1.** *Orators, Rostrums, and Propaganda Stands*, John Craig Freeman, 2013. Augmented reality public art, Speaker's Corner, Singapore. Screenshot by John Craig Freeman.  
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## ABSTRACT

*In this paper I will present examples of my work in place-based augmented reality public art and describe the work in the context of the transition from literacy to electracy.*

profound implications for art in the public sphere and the discourse that surrounds it.

where forces come together to create strong atmosphere. This essay will give a brief overview.

With the emergence of augmented reality technology on widely used mobile devices, the distributed placelessness of Internet public discourse and identity formation comes crashing back down to place. Location is once again relevant to cultural production and digital art practices. Adriana de Souza e Silva and Jordan Frith state that,

*A new wave of theorists of locative media are today taking note of the ways in which virtual space and material space enhance, interact, and disrupt each other as mobile media present us with new kinds of embodied interaction. The digital has not replaced the physical location, but has in fact intensified it.*<sup>1</sup>

The evolution of augmented reality as a public art practice can be traced to the work of Guy Debord and the Situationist International, and their concept of psychogeography.<sup>2</sup> Not long after it's founding in Paris in the 1950s, the Situationists developed the idea of the *dérive*, a kind of open passage walk or drift. Participants were encouraged to ignore the normal traffic flows and circulations of planned urban developments and instead moved through a city in a way that followed its moods. The goal was to track the city's emotions – the feeling and atmosphere of a place, to find what they called the *plateau tourné*. A *plateau tourné* is a turntable or hub – a vortex or center of power,

## FROM LITERACY TO ELECTRACY

My work in augmented reality grows out of an ongoing collaboration with Greg Ulmer and his investigation of what he has referred to as electracy. Electracy describes the kind of literacy or skill and facility necessary to exploit the full communicative potential of new electronic media such as multimedia, hypermedia, social software, and virtual worlds. In his book *Internet Invention: From Literacy to Electracy*, Ulmer writes, "electracy is to digital media what literacy is to print."<sup>3</sup> It encompasses the broader cultural, institutional, pedagogical, and ideological implications inherent in the transition our society is undergoing.

In *Applied Grammatology*, Ulmer extends the work of Jacques Derrida and his study of grammatology: the theory and history of reading and writing.<sup>4</sup> Derrida's work focuses on the transition from oral culture to literate culture.<sup>5</sup> It turns out that we know quite a bit about this transition, which occurred or continues to occur all over the world. Ulmer uses what we know about the transition from orality to literacy in order to make predictions as to what we might expect from the transition from literacy to electracy.

Although some people speak about digital literacy and others refer to the emergent digital paradigm



as a reemergence of orality, neither adequately describes the phenomenon. Just as literacy was built on the shoulders of orality, electracy will be built on the shoulders of literacy. Reading and writing are still necessary, but not adequate in and of themselves. Electracy will require, not only new technologies, but also new institutions and a new sense of identity for individuals.

Ulmer's theoretical work on electracy and my attempts to give it form, are informed, in part, by apparatus theory of the 1970s. Although cultural theory has largely moved beyond the deterministic tenants of apparatus theory, in preference of a far more nuanced and flexible theory of cultural agency, apparatus theory still provides a useful lens through which to view and understand the social and cultural changes we are experiencing. It suggests that three elements interact in a matrix to construct culture. The first element is the technology that emerges within a society. The second is the practices and institutions that are developed to make use of the technology. The third is subject or identity formation on the part of the individuals who are living in this new apparatus and begin experiencing their lives in a different way.

Although we tend to think of technology as nuts, bolts and circuit boards, in oral culture, the technology was spoken language. At its most basic level, language was the technology developed to augment and extend human thought and memory. The institutions, which grew out of spoken language, were based on mnemonic ritual. The epic poem rhymed because it made it easier to remember. Vast collective knowledge could be passed down from generation to generation by maintaining ritual. According to Ulmer, oral people experienced identity in relation to the clan or tribe. There was no sense of 'self,' as we understand it today. The experience of selfhood was a construct of that literate invention, the novel. If you wanted to pun-

ish an oral person, you would simply ostracize him or her from the community, making him or her, in effect, nonexistent.

At the dawn of literacy in ancient Greece, the technology which emerged was, of course, alphabetic writing. Once collective knowledge could be passed along in books, it was no longer essential for individuals to memorize the entire story. It is even the case that generations could forget important knowledge, such as the fact that the earth revolved around the sun, and that knowledge could still be retrieved years later, as long as someone remembered how to read. The result was that the quantity of human knowledge was expanded exponentially.

So, if alphabetic writing was the technology of literacy in ancient Greece, Aristotle's lyceum was the institution of early western literacy, which becomes today's universities.

It took a very long time for alphabetic systems to be practiced by large portions of the world's population. Literacy was initially an elite practice. At the beginning of the twentieth century, there were certainly plenty of things to know. It was, however, still possible to organize that collective knowledge, line it up in neat rows on shelves, and index it alphabetically. By the end of the twentieth century, industrialized forms of knowledge production led to an exponential increase in the amount of things to know – a glut, of sorts. The industrialization of literacy has led to a crisis of memory.

In his book, *Everything is Miscellaneous*, David Weinberger describes the breakdown of the Dewey Decimal System of Classification in the face of this glut, and the failure of taxonomies of knowledge in favor of the miscellaneous.<sup>6</sup> In the twenty-first century, there simply has to be a different way of organizing

knowledge. We cannot build libraries big enough in an electrate paradigm.

We have witnessed the beginnings of electrate knowledge organization in the emergence of Google, Wikipedia and such. Rather than using indexical order to organize knowledge, electracy uses the hyperlink. Unlike its indexical counterpart, the hyperlink seems to function much like the human brain, moving from one idea to another, across related material by association. Since the brain exists in three dimensions, it adopts spatiality in its functions, so moving from one idea to another is also like crossing an implied space – moving from here to there.

## CHORA

Like spoken language in orality and alphabetic writing in literacy, the Internet holds the promise of augmenting and extending human thought and memory. People no longer use precious neurons remembering the banal. Can you remember your best friend's phone number? Our cell phones have become cybernetic, prosthetic devices designed to extend memory. We now carry the World Wide Web in our pockets. How soon will we line up to have it implanted in our brains?

Chora is a philosophical term described by Plato meaning a space, or place in space.<sup>7</sup> In his dialogue *Timaeus*, Plato differentiates between being and becoming. Being is intelligible but not perceptible. It describes abstract concepts, such as the essence of Justice. Becoming, on the other hand, is perceptible but not intelligible, seasons come and go, people live and die. Plato asked, how do being and becoming come together? He used the term chora to describe the space, or receptacle, where being and becoming interact. Chora is neither intelligible, nor perceptible.

It is a third kind, where order emerges from chaos, coherence from disassociation, sense from nonsense.

Ulmer writes,

*Many commentators have declared the need for a new logic native to new media, but few have indicated how to invent it. Heuristics (the logic of invention) provides one proven (literate) procedure for bootstrapping from one apparatus to the other. This method involves working analogically. The key analogy is with the Greek invention of metaphysics, meaning specifically (in Aristotle's terms) the invention of a category system. Electracy needs a mode of classification that does for the digital image what the concept did for the written word (definition as a practice organizing things according to essences and accidents).*

Chora is to electracy what topic is to literacy, the organizing space and practice through which rhetoric relates living memory to artificial memory. In our work, chora gathers multiple topics associated with a geographical region, or zone, into a scene whose coherence is provided by an atmosphere. This atmosphere or mood has an emergent quality, resulting in an unforeseeable way from the combination of topics interfering and interacting with one another. Chora-mancy is the practice of identifying, documenting or creating chora.

Many of the society's problems are intractable because they have causes that are so complex. One solution, no matter how well reasoned, could unravel the situation and proliferate into many, infinitely more complex problems. The result is a kind of reason fatigue, powerlessness in the face of aporia.

Plato described chora as a kind of winnowing basket where the chaos of the world could be sorted into the

essences of things or topoi. Like separating the wheat from the chaff, moving through a space – being there, can produce a holistic sense of understanding. The question is, can emergent electrate forms of virtual or augmented reality, convey or transpose this experience? Can augmented reality make movement through a space become an act of electrate reasoning?

One way to understand electracy is to examine the differences in the types of skills required in negotiating and communicating through the apparatus, and how those skills differ from literate skills. Perhaps text messaging is creating condensed language forms and by doing so is creating a subordinate version of written language forms. I prefer to withhold value judgment. There will be both positive and negative aspects to electracy, gains and losses. Regardless, it takes a certain acquired skill to communicate effectively via texting, and the skills required to handwrite a letter and send it as traditional mail are of little help.

Another thing to consider is where people are acquiring these skills. It may be some time before electracy is taught in school, if ever. Instead young people are acquiring electrate skills in their entertainment experience. This supports the idea that although electracy draws from textual literacy, it is in fact, a new form of cognition based on multiple information codes – image, text, speed, movement, sound, shapes, colors and navigational elements.

Within the field of neuroscience, studies in neuroplasticity suggest that the synaptic connections in the brain are formed based on the activity a person engages in and can change over time. Alvaro Pascual-Leone, Director of the Berenson-Allen Center for Noninvasive Brain Stimulation writes,

*Plasticity is an intrinsic property of the human brain and represents evolution's invention to enable the*

*nervous system to escape the restrictions of its own genome and thus adapt to environmental pressures, physiologic changes, and experiences. Dynamic shifts in the strength of preexisting connections across distributed neural networks, changes in task-related cortico-cortical and cortico-subcortical coherence and modifications of the mapping between behavior and neural activity take place in response to changes in afferent input or efferent demand. Such rapid, ongoing changes may be followed by the establishment of new connections through dendritic growth and arborization.* <sup>8</sup>

It is not a stretch to assume that children that grow up playing hours upon hours of video games during those critical years when the brain is forming, develop physically different brains than those who grow up being read to. Although it is a brain that can sometimes be burdened by attention issues, it is a brain that is capable of assimilating and associating vast amounts of layered information in an instant.

Marc Prensky coined the term digital native in his article “Digital Natives, Digital Immigrants” to describe the generational difference between people who have grownup with the Internet and those who were born before it existed or never had access.<sup>9</sup> The analogy he uses is that of language. People can learn to speak a second language, even become fluent, but electracy will always be a foreign language for the digital immigrant.

Perhaps this generation will one day become bored of the ‘toy’ part of video games. When that day comes, they will still expect to be able to be immersed in, explore, and have adventure and social interaction in, their collective knowledge base. Now is the time to begin to develop electrate forms that will be capable of accommodating this.

## THE TOWN SQUARE

For the past eight years, I have worked on the corner of Tremont and Boylston Streets overlooking the historic Boston Common, the first public park in the United States. I walk across the park every morning. As I do, I often contemplate the role that the town square plays in shaping of political discourse and national identity formation. As the location of the public discourse the town square is where we air grievances, display solidarity, express our difference, celebrate our similarities, remember and mourn.

Public hangings took place at the Old Elm Tree on the Common until 1817, an example of the public reinforcement of the shared values of right and wrong. The Common still maintains a tradition of soapbox oratory and we even have a town crier, who exchanges weather forecast and sport scores for spare change. This is why monuments and memorials are located in town squares. As Greg Ulmer points out in his book *Electronic Monuments*, monuments are an expression and acknowledgment of sacrifice on behalf of shared values. <sup>10</sup>

Since the dawn of literacy, the public square has been the geographical anchor for the public political discourse. As Benedict Anderson argued in *Imagined Communities*, the nation state was made possible, in part, by the printing press, including the invention of associated forms and practices such as the novel, contributing to the creation of national identity. <sup>11</sup> Newspapers and the rise of a mass reading public within industrialization are part of this history.

In the early 1990s, we witnessed the migration of the public sphere from the physical realm, the town square and its print augmentation, to the virtual realm, the Internet. In effect, the location of public discourse and the site of national identity formation have been extended into the virtual world. As Bernard Stiegler, among others, has argued, this virtual dimension, with

its industrialization of collective memory, is again transforming the “We,” away from the nation state to a new collectivity that he fears will be an ersatz global “America.” <sup>12</sup>

This threat/promise is a context for experiments in virtual and augmented reality, which allows us to overlay this virtual public sphere onto our experience of the physical, cultural world. It is important to keep in mind that electrate practices need to be invented, just as the technology is invented. What is the future of “We” in electracy? It is open to invention.

## COGNITIVE MAPS

Since my work in augmented reality anticipates the possible role that virtuality and network technology might play in memory enhancement and augmentation, I turned to Fredric Jameson's idea of the cognitive map. <sup>13</sup> A cognitive map is a mental image that we create in order to navigate and negotiate the world and our everyday lives. It allows us to reduce cognitive load, enhance recall, learn and remember. It is practical, in that it includes directions home or to work, for instance – go two blocks and turn right... but it is also abstract and metaphorical. All of our formative experiences have a place in our cognitive maps. In this respect, a cognitive map is like a spatial representation of our identities.

National identity is formed upon a collective cognitive map. Not unlike monuments scattered across the public square, our collective cognitive map is filled with memory triggers, which construct our common values, for better or for worse. It reminds us of our history and reinforces our metanarrative.

Understanding memory systems, particularly spatial memory systems like cognitive maps, can be very use-

ful in the invention of new electrate forms of memory enhancement. The oldest known formal method of using spatial locations to remember is the “method of loci” or “memory palace,” a mnemonic device used by students of rhetoric in ancient Rome to enhance memory. If you imagine a very familiar place, your living room perhaps, and visualize placing what ever it is you need to remember on the coffee table, as if it were an object, when it comes time to recall, it is simply a matter of walking through the living room, in your minds eye, and picking the object up off the table. The memory palace provides a model for using the spatial properties of virtual and augmented reality as a form of memory enhancement. Each point of interest can act as a memory trigger, and place can be encoded with the vast resources of the Internet.

Cognitive maps are both individual and collective, just as we experience both individual identity formation and collective, national and even global identity.

Today, the process of cognitive mapping is challenged by new technologies and systems. Some would say that within the postindustrial, networked world, the collective cognitive map is in crisis, that the world is no longer representable. The image has displaced the real in what Guy Debord referred to as the Society of the Spectacle.<sup>14</sup> There is no longer anything real to compare the spectacle to. The real has been obliterated

by simulacrum, an image without the substance or qualities of the original. As Jean Baudrillard writes in *Simulacra and Simulation*,

*The simulacrum is never what hides the truth – it is the truth that hides the fact that there is none. The simulacrum is true.*<sup>15</sup>

Accordingly, it is impossible to visualize the causes of any particular problem. The cognitive map needs to be made whole again. Augmented reality amplifies this uncomfortable condition. It is an experiment to test if electracy in combination with handheld devices can at least move us in the direction of a new, holistic cognitive map.

## WORK SAMPLES

What follows are a few examples of place-based augmented reality public art completed since 2010.

### **Border Memorial: Frontera de los Muertos**

The *Border Memorial: Frontera de los Muertos*, is an augmented reality public art project and memorial, dedicated to the thousands of migrant workers who have died along the U.S./Mexico border in recent years, trying to cross the desert southwest in search of work and a better life. This project allows people to



**Figure 2.** *Border Memorial: Frontera de los Muertos*, John Craig Freeman, 2012. Augmented reality public art, Organ Pipe Cactus National Monument, Arizona. Photograph by John Craig Freeman. © John Craig Freeman, 2012. Used with permission.

**Figure 3.** *Tiananmen SquARed: Goddess of Democracy and Tank Man*, 4Gentlemen, 2011. Augmented reality public art. Screenshot by 4Gentlemen. © 4Gentlemen, 2011. Used with permission.



visualize the scope of the loss of life by marking each location where human remains have been recovered along the border and in the surrounding desert.

Based on a traditional form of woodcarving from Oaxaca, the virtual object used to mark each of over 3,000 individual locations in Arizona alone, consists of life sized, three-dimensional geometric model of a skeleton effigy or calaca. Calacas are used in commemoration of lost loved ones during the Mexican Día de los Muertos, or Day of the Dead festivals.

The *Border Memorial* derives inspiration from public monuments and memorials such as Maya Lin's *Vietnam Veterans Memorial*. In the Identity episode of the PBS program “Art 21,” Lin's memorial work was described as “tactile experiences of sight, sound, and touch. They activate a full-bodied response on the part of the viewer, connecting us with the material aspects of their construction as well as with the private memories and thoughts that transform past events into awakenings in the present.” The Vietnam Veterans Memorial helped to shape national identity on an individual level with the intimate, one-on-one encounter embodied in the touch of a single name. People experience a similar intimate one-on-one encounter as the calaca appears on the screen of their mobile device. In a sense, they hold a memory of that individual in the palm of their hand.

Additionally, the project draws on a rich tradition of large-scale public art in the form of the earthwork and land art of the twentieth century and the experience of this work through a contemporary form of secular pilgrimage. Land art uses place as a medium. Like the *Border Memorial*, it requires that people travel to specific locations, often very remote locations.

Perhaps this project might one day be regarded as the twenty-first century successor to Robert Smithson's *Spiral Jetty*, James Turrell's *Roden Crater*, Walter De Maria's *Lightning Field*, Michael Heizer's *Double Negative*, and other seminal artworks of the American desert southwest.

Imagine now, the entire mobile Internet, and its physical manifestations' of place, as a world wide public square.

### **Tiananmen SquARed**

In 1989, students from the Central Academy of Fine Arts in Beijing erected a 10-meter tall plaster statue during the uprising in Tiananmen Square. Known as the “Goddess of Democracy” the gesture taunted government officials to tear it down, which of course, they did.

*Tiananmen SquARed* is a two part augmented reality public art project and memorial, by the anonymous ARt collective 4Gentlemen, dedicated to human rights



and democracy worldwide. The project includes a virtual replica of the “Goddess of Democracy,” placed back in Tiananmen Square, where she belongs.

The other indelible image from the Tiananmen Square uprising was, of course, “Tank Man” facing down a column of Type 62 tanks. Visible only through the viewfinder of a smart phone, both virtual objects have been placed in Beijing at the precise GPS coordinates where the original incidents took place.

#### Water wARs

*Water wARs*, is a pavilion for undocumented artists/squatters and water war refugees, which anticipates the flood of environmental refugees into the developed world caused by environmental degradation, global warming and the privatization of the world's drinking water supply by multinational corporations like Bechtel.

#### CONCLUSION

In Timaeus, Plato writes about Solon and his voyage to the Nile River delta, where he learned from Egyptian priests and the keepers of ancient records about Greece's defeat of the Atlantans, a story that had been forgotten by the Greeks themselves. Solon returned to Greece to tell the story of its own history. Solon was a practitioner of the Greek institution of the *theoria*. *Theoria*, or *θεωρία* in Greek, is the root of both the word *theory* and of *tourism*. Interestingly, the word translates to English as «to consider, speculate, or look at.» The *theoria* was a group of trustworthy people or an individual, *theoros* (*θεωρός*), literally “spectator,” who would be dispatched to distant lands by the community, in search of the truth. Solon lived in a time, not unlike ours, that was awash in rumor and myth, stories of gods and sea monsters. The *theoria*'s job was to go to these faraway places, investigate, and report back to the community in... you guessed it ...the public square.

Figure 4. *Water wARs*, John Craig Freeman, 2011.

Augmented reality public art. © John Craig Freeman, 2011.

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When considered in this context, my work can be regarded as a prototype of a new, theory-based virtual tourism, or secular virtual pilgrimage. In order to experience location-based augmented reality, a person must go to the location where the work has been placed. Travel to experience a work of art has always been an important aspect of the history of art and contributes to its transformative capabilities. The act of navigating a space by following virtual objects is reminiscent of the Situationist *dérive*. Travel and mobility are key to art that relies on this *dérive*, the experience of walking, of encountering place. The virtual objects and their placement at specific GPS coordinates are not unlike the *plateau tourné*.

Museums largely undermine this experience. It could be said that people have to travel to museums, but the works of art contained within museums have largely been removed from their places of origin, stripped of the context of their making. The “Border Memorial” requires a person to travel, often by foot, deep within the Southern Arizona desert to experience it first hand. Experiencing this work is much more akin to a visit to the shrine of Saint James at Santiago de Compostela – less the religious connotations, than a visit to the Museum of Modern Art.

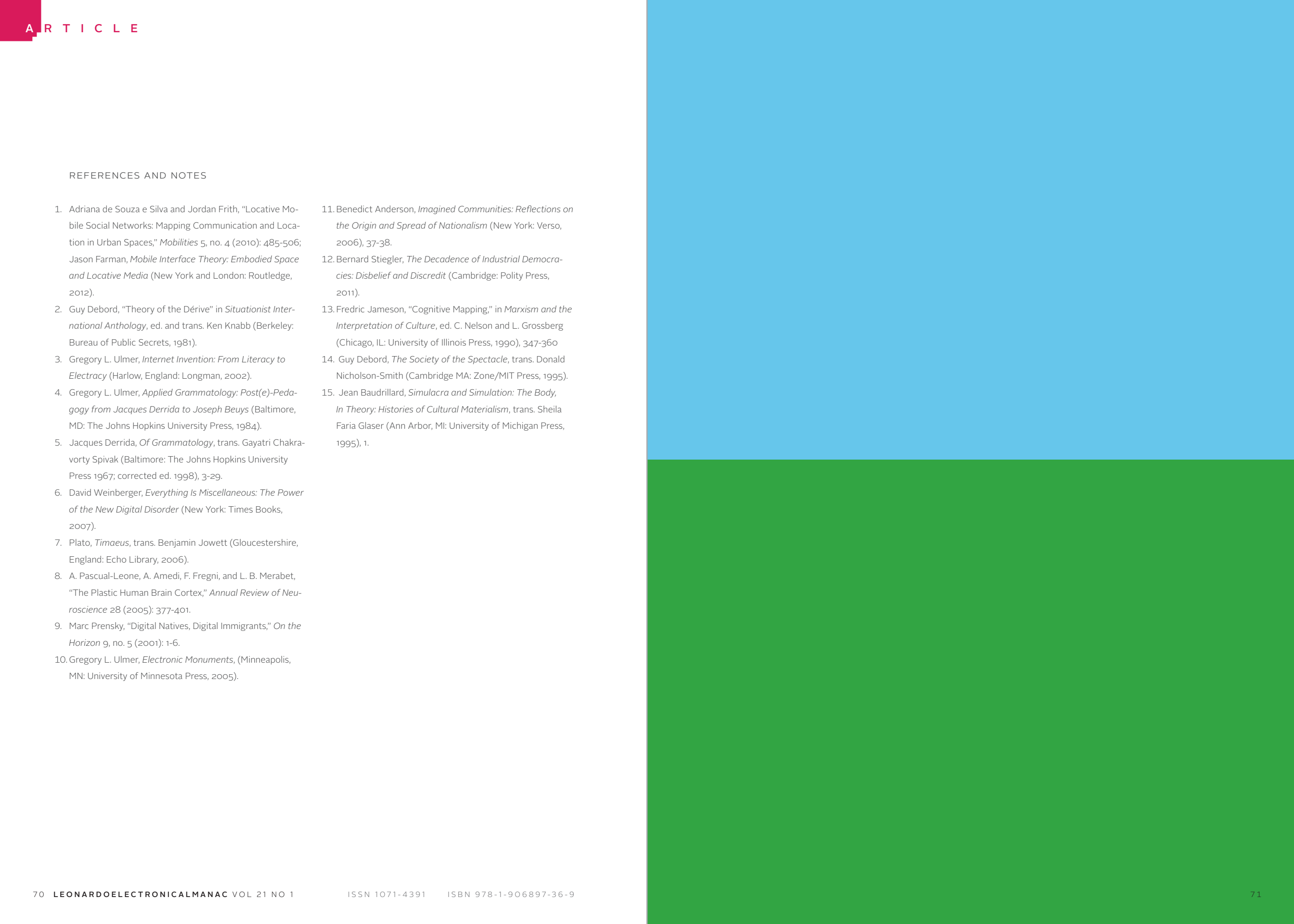
These experiments in augmented reality public art define a *chora*, a place that contains the *aporia* of public policy. Within it resides all of the *topoi*, rubbing up against each other, colliding, often violently. In the case of the “Border Memorial” these *topoi* include, migrants trying to get to work safely; the border patrol, trying to do their job; humanitarian organizations trying to save lives by supplying water stations; minutemen shooting holes in the water tanks; the medical examiner trying to identify remains; gun smugglers running guns, drug smugglers running back, the media trying to generate spectacle; employers trying to save a buck, politicians trying to get elected or not

get thrown out of office; historians trying to write or rewrite the history.

It has to be the case that new forms of monuments and memorials will emerge within *electracy*. Undoubtedly these forms will make use of the distributed, anywhere and nowhere characteristics of the Internet. The *electrate* public square will be simultaneously local – site specific, and global – distributed. ■

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REFERENCES AND NOTES

1. Adriana de Souza e Silva and Jordan Frith, "Locative Mobile Social Networks: Mapping Communication and Location in Urban Spaces," *Mobilities* 5, no. 4 (2010): 485-506; Jason Farman, *Mobile Interface Theory: Embodied Space and Locative Media* (New York and London: Routledge, 2012).

2. Guy Debord, "Theory of the Dérive" in *Situationist International Anthology*, ed. and trans. Ken Knabb (Berkeley: Bureau of Public Secrets, 1981).

3. Gregory L. Ulmer, *Internet Invention: From Literacy to Electracy* (Harlow, England: Longman, 2002).

4. Gregory L. Ulmer, *Applied Grammatology: Post(e)-Pedagogy from Jacques Derrida to Joseph Beuys* (Baltimore, MD: The Johns Hopkins University Press, 1984).

5. Jacques Derrida, *Of Grammatology*, trans. Gayatri Chakravorty Spivak (Baltimore: The Johns Hopkins University Press 1967; corrected ed. 1998), 3-29.

6. David Weinberger, *Everything Is Miscellaneous: The Power of the New Digital Disorder* (New York: Times Books, 2007).

7. Plato, *Timaeus*, trans. Benjamin Jowett (Gloucestershire, England: Echo Library, 2006).

8. A. Pascual-Leone, A. Amedi, F. Fregni, and L. B. Merabet, "The Plastic Human Brain Cortex," *Annual Review of Neuroscience* 28 (2005): 377-401.

9. Marc Prensky, "Digital Natives, Digital Immigrants," *On the Horizon* 9, no. 5 (2001): 1-6.

10. Gregory L. Ulmer, *Electronic Monuments*, (Minneapolis, MN: University of Minnesota Press, 2005).

11. Benedict Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism* (New York: Verso, 2006), 37-38.

12. Bernard Stiegler, *The Decadence of Industrial Democracies: Disbelief and Discredit* (Cambridge: Polity Press, 2011).

13. Fredric Jameson, "Cognitive Mapping," in *Marxism and the Interpretation of Culture*, ed. C. Nelson and L. Grossberg (Chicago, IL: University of Illinois Press, 1990), 347-360.

14. Guy Debord, *The Society of the Spectacle*, trans. Donald Nicholson-Smith (Cambridge MA: Zone/MIT Press, 1995).

15. Jean Baudrillard, *Simulacra and Simulation: The Body, In Theory: Histories of Cultural Materialism*, trans. Sheila Faria Glaser (Ann Arbor, MI: University of Michigan Press, 1995), 1.

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