

Mobility as world-building/technologies at play

Anne Galloway

For her dissertation project at Carleton University, Ottawa, technology researcher Anne Galloway asks herself what the design of mobile and ubiquitous technologies can teach us about emerging relations in urban space and culture. Here she presents some of her findings so far, investigating how mobile processes continually flow and playfully shape our worlds.

Anne Galloway's site

http://www.purselipsquarejaw.org/research_design/index.html

The increasing pervasiveness of mobile technologies is changing the ways we live, work and play – and social and cultural researchers are now tasked with trying to understand the implications of this mobility. At the risk of stating the obvious, I find it helpful to remember that mobility itself is characterized by constant change. After all, to move is to refuse stability and fixed positions, and this suggests that the changes we are experiencing will also resist being pinned down by explanation or prediction. So, instead of trying to say what mobility *is* or *will be*, I am interested in looking at how people, places and objects *come to be*, or how mobile processes continually flow and shape our worlds.

One way of looking at mobility is through play. The word play comes from the Old English word for movement and it refers to the state of being active, operative or effective. In this sense, play is world-building. Through play, we imagine, explore, express, confirm, maintain, adapt and subvert facets of our individual and collective relations. Sometimes there are set rules but, according to cultural theorists such as Hans Georg Gadamer, the spirit of play also goes against the reduction of ambiguity and multiplicity by exhibiting a phenomenon of excess. In other words, sometimes play means colouring outside the lines or overflowing containers.

Becoming mobile

In-between spaces, such as the beach between the ocean and the land, are interesting examples of ambiguity and multiplicity. Anthropologists have long studied cultural rituals that create and shape these and other liminal spaces. Liminal spaces are thresholds or transitions from one state to another, such as the space between no longer being a girl and not yet being a woman. From competitive games to narrative performances, rites of passage often involve play as a means to create these new relations, to flow between ambiguity and certainty, multiplicity and singularity. Anthropologist Marc Augé writes about similar non-spaces, such as airports, in which we are neither at home nor at our destinations.

In these ways, liminal or non-spaces are *becomings* and similar forms of transition, as well as *hybrids*, where relations between people and objects are in flux. Cultural theorists Gilles Deleuze and Félix Guattari describe related processes in their accounts of de-territorialization or *becoming* – which occurs along lines of flight that cut across states of being.

Artists have also playfully explored mobility and its boundary-blurring ability. In addition to film and animation, early attempts to introduce actual movement into works of art include Alexander Archipenko, Marcel Duchamp and László Moholy-Nagy's kinetic sculptures. But it is Alexander Calder who is credited with the invention of the mobile. Calder's mobiles hang from ceilings and walls; his standing mobiles involve fixed and moving parts, where the fixed elements do more than support the mobile elements; and his stabile sculptures suggest mobiles at particular points in space and time. Calder described his mobiles as nothing but moving elements, while Jean-Paul Sartre explained those movements as unpredictable but not random, limited but not determined.

Calder Foundation
<http://www.calder.org/>

Building mobile worlds

Researchers have documented the wide variety of ways in which the consumption of mobile phones is connected to identity – or how people, places and goods simultaneously become interconnected and differentiated. For example, in worlds where a telephone number indicates a certain stability and reliability, mobile phones allow homeless people a sense of permanent connection, and in parts of the world where landlines have never been installed, mobile phones offer unprecedented communication abilities. But not all mobile phones are created equal, and in saturated areas, more expensive or multi-functional models are used to distinguish their owners from the casual user. At the same time, even the most basic models offer a multitude of phone accessories and ringtones to set users apart.

Private conversations are commonplace in public areas, and boundaries between work and leisure are increasingly blurred as mobile phones allow people to work outside the traditional confines of the office, as well as into the evening and weekends. Camera phones may be used by citizens to document government atrocities and broadcast them to the world, and yet we struggle to protect people's privacy as they enter places such as the locker-room or schoolyard.

Young people are often considered the most enthusiastic users of mobile technologies. Text messaging is part of their everyday communication with peers – an increasing difference from less technologically inclined generations. The same distance that allows a teenager to flirt with a stranger without creating social obligation facilitates the bullying of another without fear of resistance.

But mobile technologies include more than mobile phones and their users. As people upgrade their phones and other mobile devices with increasing frequency, the environmental impact of this turnover has only just begun to be felt. The mining of tantalum – an element required for the smaller devices consumers demand – is causing environmental damage in places such as Central Africa; and few countries or companies have instituted systematic plans to recycle or reuse discarded electronics. To these environmental concerns we may also add the unknown impact on public health of long-term exposure to electromagnetic fields.

At the same time, the use of many mobile technologies is regulated by the telecommunications industry. For example, wireless Internet access is increasingly available in urban areas, but pay services are more common than free public access and digital divides appear to be moving seamlessly into the wireless world.

Beyond interpersonal communication devices, mobile technologies include radio-frequency identification (RFID) tags, which will allow manufacturers and retailers to mark objects and track the entire production and distribution process – if not the actual purchase and use of individual goods. Privacy concerns have slowed their adoption, but the US military and major global retailers such as Wal-Mart have plans to implement RFID technologies to manage their inventories within the next couple of years.

All of these examples begin to demonstrate that building mobile worlds engages complex processes involving the interconnection and differentiation of a wide variety of people, places and objects. It implicates collectives of humans and non-humans, or long and complex histories of relations between materials and ideas, industry and business, government and law, individuals and groups, to name but a few. The exercise of power in everyday life is inextricably connected to these mobile processes, and cultural theorists such as Gilles Deleuze have argued that we have moved from a disciplinary society to a control society. If the disciplinary society may be understood to *mould* individual and collective behaviour through categorical segregation and fixing, societies of control instead *modulate* interactions by integrating and organizing difference.

Recalling my earlier focus on ambiguity and multiplicity, control societies comprise hybrid and mobile forms of interaction, rather than structures that follow predictable rules. And one of the ways in which we negotiate these relations is through play. The remainder of this essay presents some of the ways in which we are playing with mobile technologies, and what might become of these situations and activities.

Playful technologies

One of the ways in which we play with mobile technologies is through competitive games. For example, *Noderunner* players use mobile technologies to locate and access wireless networks around the city. In a recent *receiver* article, Matt Adams discussed mobile mixed reality games as ways for people to simultaneously play online and on the streets. Similarly, *FIASCO* is a competitive game where players perform stunts on the street and document them on virtual maps of the city. What all these types of play have in common is their role in creating composite worlds where the actual and the virtual slide together. They challenge us to rethink our relations with particular spaces, objects and people and draw attention to our active construction of place.

Noderunner

<http://www.uncommonprojects.com/noderunner/index.php>

Matt Adams

http://www.receiver.vodafone.com/09/articles/05_page01.html

FIASCO

<http://www.confectious.net/fiasco/index.html>

Less formal types of play are more common, and more overtly critical of the ways in which mobile technologies and networks are currently being developed and used. For example, *Wi-Fi Hog* is a personal system for mobile devices that allows people to gain complete control over a wireless network. *Oscillating Windows* involves the movement of a projected image from one physical space to another through particular configurations of people equipped with networked devices: when people are in the right configuration, the image can move through the network. *The Public Broadcast Cart* outfits a shopping cart with a microphone, a wireless computer and an FM radio transmitter, allowing pedestrians to become producers of web and radio content. *Magicbike* is a mobile Wi-Fi hotspot attached to a bicycle that allows easy and discreet ad hoc connectivity in places otherwise without wireless access.

All of these technologies play with our assumptions about how and where networks function, and challenge us to revitalize public spaces and put power back in the hands of individuals.

Wi-Fi HOG

<http://www.mle.ie/~jonah/projects/wifihog.html>

Oscillating Windows

<http://www.mee.tcd.ie/~moriwaki/windows/index.html>

The Public Broadcast Cart

<http://www.ambriente.com/wifi/>

Magicbike

<http://www.magicbike.net/>

More expressive forms of play are also being explored through mobile technologies. *Sonic City* is a mobile system that allows people to create music in real time by walking through and interacting with the urban environment. *Inside/Outside* outfits a woman's handbag with the ability to monitor and display local environmental conditions. Both examples take familiar cultural practices and objects and subvert them to individual needs and desires, while simultaneously shaping our experience of public contexts.

Sonic City

<http://civ.idc.cs.chalmers.se/projects/soniccity/>

Inside/Outside

<http://www.kakirine.com/handbag>

In each of the projects described above, researchers and designers are playing with mobile technologies as well as with what it means to become mobile. These playful explorations are critical of our relations with each other and with technologies – and exemplify what Dunne and Raby have called critical design, or design that challenges social, cultural, technical and economic expectations. They demonstrate what is at stake in becoming mobile, and suggest ways in which we can more actively engage in these processes. Projects such as these give me hope that through play we can build mobile worlds that honour the diversity of cultural practices in socially responsible ways.

This article was written exclusively for *receiver*
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