

# SHAPING SPACE

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## **Locative Media in a City under Corporate Control**

We become what we behold. We shape our tools and then our tools shape us.  
- Marshall McLuhan, *Understanding Media* (1964)

Let me start with a story about a joke. In 1996 Dino Igancio, a San Francisco artist, started the 'Bert is Evil' website on which he posted photographs confirming that *Sesame Street's* Bert is evil.<sup>i</sup> The images showed the muppet next to notorious people and in famous historical scenes. The photographs were meant as a joke; the muppet was inserted into actual photographs using Photoshop. After a while Ignacio stopped producing new pictures, however a community of 'Bert is Evil' enthusiast had already emerged which continued posting new material from all over the world on several mirror sites, including an image of Bert interacting with terrorist leader Osama Bin Laden. Meanwhile in Bangladesh, Mostafa Kamal – a production manager of Azad Products - picked up an image of Bert from the web after scanning the web for Bin Laden pictures which were to be printed on anti-American signs, posters and T-shirts. The company printed 2000 posters; "we did not give the pictures a second look or realize what they signified until you pointed it out to us," Kamal would explain to the Associate Press later. CNN reporters recorded the unlikely image of a mob of angry Pakistanis marching through the streets waving signs depicting Bert and Bin Laden. American public television executives spotted the CNN footage and threatened to take legal action, saying the people responsible should be ashamed of themselves; "we are exploring all legal options to stop this abuse and any similar abuses in the future."<sup>ii</sup>

The story aptly illustrates how de-territorializing technologies assist distribution, mobility, reproduction, and community forming. Moreover the story is a fitting example of conflicting artistic and cultural perspectives, textual interpretation, and institutional authority. Consumer friendly software packages, such as Photoshop and the Internet, allow anyone with basic practical and creative skills to become producers, making their creations available for anyone with access to the Internet. In the last decade cyberspace has been cluttered with recycled images, texts and data; there seems to be few restrictions with regards to filtering, editing and authority - anyone with a two bit opinion, a photograph or a mere rumor can (together with mistakes in grammar, spelling, and sources) share their contents, leading to an overflow of untrustworthy



**Image 1.1** Bert and Bin Laden on a  
Anti-America poster in Bangladesh

information and a decline in editorial decision-making as hierarchical structures diminish. This new form of participation in media may assist grass-rooted democracies, as it allows users to actively contribute directly in the text; at the same time making it an opponent of traditional institutions, as it negatively affects market control, promotes an overload in diversity, allows for (negative) feedback, and damages a century old copyright system. The harsh remarks by the public television executives regarding legal action against those responsible for the uncontrolled act of doctoring copyrighted material and its after effect, exemplifies how this new media form of participation culture conflicts with the old media form of institutional authority. In the last decade the cultural industry endured many changes at all levels and accordingly, so did society. *Let's start with the city.*

Contemporary cities are taking the shape of a spectacle as public spaces are bombarded and overloaded with images, messages, art, signs, texts and ads. Nowadays the street, the public stage of political movements, theater, playing children and social contact, are increasingly becoming virtualized with electronic screens and projections, taking away the public function of open space: "public functions become blurred by the flow of light and images drenching us in a fetish of alienating desires as we follow our necessary route through the city, from A to B."<sup>iii</sup> Over the last decades our public space has gradually more been privatized; streets, squares and parks are more and more covered with brands and logo's; public domains such as schools, universities, and libraries are ever more dependent on corporate sponsoring and turning in a shopping mall variant; public transport such as busses and trains are equally being privatized and transforming into mobile billboards. Furthermore, the city is converting into a pool of diversities; similar to the Internet the city is storing up an immense variety in cultural expressions and products. The uniform and the traditional costume have made room for an assortment of multiplicity; *being different allows one to belong* seems to be a fitting fashionable statement. However, the range of cultural expressions goes hand in hand with an overflow of dissimilar opinions, products and meanings. Not only does it become increasingly difficult to find your way, the devaluation of hierarchical control both on the Internet and in the city makes the whole thing superficial and lacking depth; of course there are places and sites that are reliable and insightful, yet they are getting more and more swallowed up by the homogenizing machine of shallowness. Whilst one might argue that diversity and egalitarian contribution lead to collective intelligence and the collapse of the cultural industry monopoly, marketing experts have already discovered that diversity is the defining issue for Generation X and that by incorporating an emphasis on diversity into their brands, they can enhance their market shares.<sup>iv</sup> Diversity marketing makes global expansion less costly; "rather than creating different advertising campaigns for different markets, campaigns could sell diversity itself, to all markets at once."<sup>v</sup>

With the commencement of affordable portable devices connected to the Internet, such as 3G cell phones, users are able to make use and contribute to the computing and

communication capabilities cyberspace offers at any place and at any time. For many developing countries, where desktop and laptop computers are considered too expensive, these portable devices are a first time opportunity to be part of the global network. The rise of and increasing expansion of cell phones, Internet enabled devices, and Wifi connections facilitates an integration of cyberspace in urban areas. Virtual information is converging with the actual city, creating what Lev Manovich calls an 'augmented space'.<sup>vi</sup> In this augmented reality the bombardment of images on and off the Internet are mixing creating new forms of disinformation and commercial spam. Moreover, the technology makes annotation and mapping of location easier and thus facilitates possibilities for users to contribute on another altitude. Theoretically it is possible that there are as many maps as there are mapmakers, making it practically impossible to find your way. Yet, it also assists new forms of privacy intrusion and an increase of surveillance, allowing authorities to track and trace anything and anyone. Whilst telecom providers store conversations and geographic coordinates, and Radio Frequency Identification (RFID) chips are implanted to track and trace objects and people, and CCTV Cameras keep an eye on everyone, the technology we created is grabbing a hold on us and shaping reality at every level. In due course urban space will be controlling all motion of people, cars, and products *everywhere*.

### **Simulacra and routing flow**

In *Simulacra and Simulation* Jean Baudrillard begins with a tale about mapmakers that create a map of a powerful Empire. The level of detail in this map is so high that it integrates perfectly with the represented territory. However, as soon as the map is finished, it starts to perish. Eventually only the desert still contains some remains of the map. Baudrillard suggest we currently live in a reverse situation: not the map – the representation of the physical world, the simulacrum – is decaying, but the represented reality itself. Every corner of the world has been mapped, mediated. The western person lives in a world dominated by simulacra: films, photographs, paintings, novels, newspapers, radio and television programs, and internet. We hardly know the world from our own experience. The world as we know it primarily consists of simulacra, which gradually more and more seem to have no relation to something 'real'. It becomes increasingly difficult to find pieces of the old, non-signified reality in it. The non-imitated reality is incorporated in a reality of imitations. The map, the model exists before reality and ultimately shapes reality, is reality itself – *the precision of simulacra*. Baudrillard observed a historically pattern based on the relation between the tendency people have to define and mark reality with signs – simulacra – and technological development, with which these signs can be multiplied. Imperative in this statement is that Baudrillard argues every artifact potentially can be a sign, a carrier of meaning.

Baudrillard asserts each simulacrum contains a life cycle, which can be categorized in four phases. In the first order of simulacra the image is the reflection of a

basic reality; in the second order it masks and perverts a basic reality; in the third it masks the absence of a basic reality; and finally in the fourth order it bears no relation to any reality whatever: it is its own pure simulacrum.<sup>vii</sup> The story of Bert and Bin Laden is a fitting case of reproductions leading its own life: Bert is a 'talking' puppet on a television show, representing a stereotyped grumpy man in the world outside the show. One could say Bert is part of the first order of simulacrum, as it is a reflection of a basic reality. The popularity of the sketches and its cross-border recognition made Bert into a celebrity appearing on T-shirts, mugs, cartoons, and in the hands of fans as a doll. Bert stood for more than just a complaining man: Bert became an icon, one that characterizes the sketches and its comical element, Bert stood for the show. Consequently Bert shifted to a second order of simulacrum, as images of Bert mask and distorts the original veracity. When in 1997 images of Bert were photoshopped for a series of "Bert is Evil" appearing on the Internet (showing the puppet with a mean expression on his face as Jack the Ripper, the assassinator of J.F. Kennedy, with Pamela Anderson, and as mentioned next to Bin Laden), Bert moved to the third order of simulacrum. Bert no longer represents the world-weary man, this original reality is dead; images of Bert mask his dearth. Finally Bert moved to the fourth order of simulacrum when his picture appeared on a series of protest posters, leading to controversy and shock. The image is what it is and nothing more: an image that refers to everything and nothing, but above all relates to itself and many contrasting interpretations. It leads to a direct effect, a sensation, a stimulation dismayed from depth. With digital technology it can be reproduced unlimited and unchanged, allowing it to lead its own life.

But there is more to in the story of the map; the map *determines* the territory. The assembly of images and signs has constructed its own reality, one that directs and controls all aspects of our life. Not only have the fictional characters of the sit-com *Friends* become closer to many people than their 'actual' friends, urban space is shaped by hyper-real situations and is influencing our everyday practices. Consequently one might argue that maps construct the representation of public space; is our perception of spatial organization and proximity between cities and urban spaces constructed by mapmakers? And are places losing their relation to reality, turning into meaningless transit spaces? And are people prisoners of an enclosed space whose walls are people's own routine? Are representations ultimately routing our cities?

In *The Space of Flows* Manuel Castells creates a dialectical opposition between the spatial organization of our common experience defined by cities – referred to as the 'space of places' - and a new logic of space structured on networks and flows of information – referred to as the 'space of flow'.<sup>viii</sup> Castells proposes that the space of flows in traditional urban spaces transforms the city forms into 'processes'. The film *Koyaanisqatsi*<sup>ix</sup> exemplifies how metropolises are representative of circulation spaces, where people generally do not walk on the streets and prefer cars and freeways to move around, whilst being controlled by technology, architecture and corporate sponsoring. Following Castells it is possible to argue that urban public spaces have become

increasingly non-places, it is a transit space that neglects social interaction, gazing and context. Although the space of flows should not be interpreted as a placeless space, places have increasingly lost their meaning in comparison to flows.<sup>x</sup> A place can be described as a setting that carries meaning and has a self-contained form within boundaries of physical contiguity.<sup>xi</sup> These places may contribute to bringing people together as places have a capacity to encourage communication and interaction both socially and with the environment. *Koyaanisqatsi* shows how after the dawn of modern society characterized by advanced transportation technologies and mass production in the 19th century, people started to circulate faster through urban spaces, losing the capacity to communicate and interact with each other while in transit; modern cities are designed to control the flow of people, similar to information networks controlling the flow of processes.

In 1984 the Automatic Traffic Surveillance and Control Center came into existence when the city council and planning board of California decided to link the electronic traffic light sensors in the asphalt to a central computer.<sup>xii</sup> The computer was programmed to respond to Olympic Games timetable, which were held in Los Angeles, making it possible to direct the traffic flow to the stadiums during peak hours. Currently thousands of electronic measure points provide information to the central computer, which controls more than three thousand traffic lights. The computer compares the collected data to public transport schedules; if a bus is delayed, the computer will react by keeping the traffic lights green until the delay has dropped.<sup>xiii</sup> Furthermore operators are able to alter the flow of traffic; in case of an emergency or a terror attack, the system can close off or open up specific streets. Currently improvements in consumer technologies make it possible to connect the traffic center to cell phones or mobile navigation systems. Cell phones facilitate a ubiquitous data space allowing control centers to calculate the position and traveling speed of individuals, making it possible to optimize the stream. In addition commercial navigation systems allow people to choose an alternative path; a child friendly way, an ecological route, or a picturesque road.

Central in this story is the city as a scenario, as suggested by Baudrillard. Every corner, every square meter of city space is in the process of being mapped, curate, narrated, staged and being played with. However, as this map is constructed, the represented world is in decay; not only are effects of postmodernization - namely downsizing and outsourcing - causing massive unemployment and leaving cities to crumble, moreover the map and its

representations are losing their relation with reality. Multinational corporations, together with their stars, blockbusters, bestsellers and billboard charts are prescribing publics to belong to a sensation, an experience or an ideology, each with a universal way of life; 'The American Dream'. Corporate multinationals have outgrown governmental authority. Western cities have transformed into service centers; the fabrication of products has shifted to

one of advertising and sales of bulk obtained from low wage countries. Consequently the migration of labor forces from farm land to factory cities has resulted into unemployment and a festering of urban space. As institutions of confinement – school, barracks, factory, prison, hospital - are gradually disappearing, or turned into shopping malls and luxurious apartments; cities are turning into centers of control: the marketing capitals of the world. Copyrights and advertising form the basis of urban culture; corporate logos cover our streets, clothes, domains of education and healthcare, thus turning life and space in a matching corporate chimera. Advertisements do not longer promote a product, they promote a way of life; and sell an illusion. These illusions mask and distort the basic reality: ghettos, shanty towns, and possibly loss of all meaning.

Moreover these illusions control our life. The backdrop is that our society is confronted with deterritorialization, homogeneity and superficiality; former

structures of authority in society were more about the individual and local identity than its dominant contemporary form. Meaningful social public places are lost in the flow of space; city design is reflecting the structure of technological networks, where data is processed through monotone routes. This ongoing transition will take new shape with the commencement of augmented space, and the possibilities it offers its public. There is now a large body of work and practice by new media artists concerning portable and wireless technologies and the cultural shaping and connotation of location. Various new media theorists, such as Drew Hemment, suggest a possible return of place from that 'placeless place' of cyberspace; "the exploratory movements of Locative Media lead to a convergence of geographical and data space, reversing the trend towards digital content being viewed as placeless, only encountered in the amorphous and other space of the Internet."<sup>xiv</sup>

Locative Media distinguishes itself from older forms of media because of its quality to annotate and trace, with the former standing for their emancipatory potential and the latter signifying a perceived 'Orwellian Society'. Because both annotation and tracing are symbiotic constituents of Locative Media, analyzing affect will have to include both the unfettered and authoritarian function of Locative Media. In order to do this effectively I will discuss shift in power evident in contemporary cities. Cities are conveying publics how they may, can, sometimes how they have to, and sometimes how not to, behave and move. This can be related to the concept protocol – a universal, controlling logic that produces a horizontal network – in the sense that publics are voluntarily participating in the creation, expansion and tweaking of the pronounced norm. This process is assisted by technology, which in turn is managed by internal protocols. As urban territory is increasingly being integrated with virtualized information networks transforming into

augmented space, assessing the role of Locative Media is increasingly vital. In the following chapters the paper will touch upon the following questions:

Will Locative Media practices in augmented city space ultimately liberate or confine place?

Following the convergence of media and devices in one wireless, all-encompassing, wearable module, are we not giving privacy and 'police monopolization' away to an integral network of citizen and consumer surveillance?

Are Locative Media yet another form of distraction, to mask the third world entering Western society?

Are Locative Media practices the result of the global masses, modeled in order to unite, fight, emancipate and democratize?

Are annotating practices ultimately giving birth to a co-created utopia, or will it result in contradicting interpretation and loss of connotation, as authority and selectivity diminish with peer productions?

In order to answer these questions I will study how the expansive practice of the information network in urban territory and in the hands of individuals will affect society. I will reason Locative Media characterizes the postmodern age — following Jean Baudrillard, Frederic Jameson and Guy Debord — as one of 'hyperreality' where the real object has been effaced or superseded, by the signs of its existence. Central are theories of protocol, hyperreality, collective intelligence, and contemporary art. In order to effectively trace the materialization of Locative Media, the paper will be centered on three themes: the effects of postmodernity on urban space and place, counter movement, and reformation. The main research question can be formulated as such:

*Can collective and artistic use of Locative Media give voice to silent, repressed and hidden to bring back individuality and local identity, or will they be another form of distraction limiting and confining its users?*

## CITIES IN POSTMODERNITY

Romance is dead. It was acquired in a hostile takeover by Hallmark and Disney, homogenized, and sold off piece by piece.

- Matt Groening, *The Simpsons* (1997)

Jean Baudrillard uses the term 'disneyfication' to explain what he observes as a shift to homogeneity and hyper-reality evident in cities today: the American amusement park *Disneyworld* in California is the central model of contemporary American culture. Our western culture seems to slowly transform itself into an amusement park, one that is continuously being reconstructed in order to adjust to cultural alterations, threatening to harm the illusion of its significance. The world outside Disneyworld – the domain of dreams – is in contrast to the amusement park. However, the famous Disney characters (Mickey Mouse, Donald Duck) are personifications of the glorified and accomplished American way of life. They embed the ideals which Americans seemingly nurture: ordinary people (embodied by animals) who become heroes. Consequently, Baudrillard argues, Disneyworld does not oppose the outside world as one would imagine at first instance. On the contrary, Baudrillard reasons, Disneyworld is as reasonable as non-Disneyworld; in the world outside the amusement park the American permanently gets bombarded with pictures, signals, road signs, art, popular culture, adverts, television, and media images which maintain the illusion of the American Dream. The American lives in an overload of evidence and verifications that the American Dream really exists.

Baudrillard observed that all large cities are surrounded with amusement parks, which he depicts as 'imaginary stations' – similar to power stations that allow the dream to reside. The biggest fear of the American is to awaken from the American Dream. When that happens, one lands in 'le désert du réel'. This reality is one of terrifying poverty, discrimination, trailer-trash and deceiving politicians. Baudrillard argues that the complete American preoccupation with movie stars, glamour and idolization can be explained as a strong offensive against the awakening from the attractive illusionary world. The attraction of this Hollywood-illusion is so strong that the American landscape has transformed into the way idealized America is portrayed repeatedly in films. Consequently the real America in a sense is more real than real. Reality vanishes in what Baudrillard refers to as hyperreality – a situation where real and unreal are indistinguishable. Although Baudrillard never used the term postmodern in relation to his work, it is applicable when characterizing contemporary society.

Frederic Jameson emphasizes several trends that distinguish postmodernity in contemporary society from modernity. The latter in broad lines dealt with the fostering of progress, thought to be achievable by incorporating principles of rationality and hierarchy into aspects of public and artistic life. Jameson recognizes a shift in hierarchy as authority has become integrated in a surface, and thus lacks depth, becoming

superficial and rejecting models that explained people and society in orders (such as hermeneutics, the dialectic, Freudian repression, distinction between authenticity and inauthenticity, and the semiotic distinction of signifier and signified). Secondly the modernist 'Utopian gesture', which involved the process of articulating misery in its beauty through art, has turned out to be obsolete. According to Jameson in the postmodernism movement the object world has mutated and is now a set of simulacra. Modernist art attempted to redeem the world from its decline in religion and give back its life, which enlightenment and rationality had removed. The postmodernist period however declares this as useless. Thirdly, Jameson observes a diminishing of affect; although not all emotion has waned, society has numbed down, emotion is somewhat obscured: pastiche is becoming a universal practice as personal style is gone. In *Postmodernism and the Video-Text* Jameson sums up:

We are left with that pure and random play of signifiers which we call postmodernism, and which no longer produces monumental works of the modernist type, but ceaselessly reshuffles the fragments of preexisting texts, the building blocks of older cultural and social production, in some new and heightened bricolage.<sup>xv</sup>

Furthermore, Jameson argues that distance has disappeared in the new space of postmodernity; a new global space. "We are submerged in its henceforth filled and suffused volumes to the point where our now postmodern bodies are bereft of spatial coordinates". The various other features of the postmodern which he identifies "can all now be seen as themselves partial (yet constitutive) aspects of the same general spatial object".<sup>xvi</sup> Jameson's observations are similar to Baudrillard's critique of postmodern culture. Central in Baudrillard's observation are the image and mass culture. In the twentieth century society has been overloaded with so many images, that these images are forming their own reality: the difference between representations of a basic reality and the actual basic reality itself is diminishing and in due time will completely disappear. According to Baudrillard we currently live in a world of simulations, creating a hyper-reality, where images mix and reproduce, without a necessity of maintaining reference to a reality: the representing images devour the reality. Both Jameson and Baudrillard define postmodern culture as a play in which images and signs refer to each other. However, Jameson does not draw conclusions regarding veracity, as Baudrillard does. To Jameson and Baudrillard, the postmodern era has seen a change in the social function of culture. They both identify culture in the postmodern age to have been deprived of the autonomous status it once possessed. Rather, the cultural has expanded, to consume the entire social realm, such that it all becomes cultural.

In short postmodernism can refer to a cultural, intellectual, or artistic state lacking a clear central hierarchy or organizing principle and embodying extreme complexity, contradiction, ambiguity, diversity, and interconnectedness or interreferentiality. The anti-ideological ideas apparent in postmodernism have had

diverse political implications that contributed to the feminist movement, racial equality movements, gay rights movements, most forms of late 20th century anarchism, and even the peace movement, as well as various hybrids of these in the current anti-globalization movement. None of these institutions, however, entirely embraces all aspects of the postmodern movement in its most concentrated definition, but they reflect, or borrow from, some of its core ideas.

In this chapter I will clarify how increased mobility, the Internet, and deterritorialization have altered physical space. Globalization, the distributed network and multinationals mark society in postmodernity. Central in this chapter is the idea that locality and individuality are homogenized.

### **From Disciplinary Society to a Society of Control**

Building forth on Foucault's environments of enclosure located in the disciplinary society in the eighteenth and nineteenth centuries, in *Postscripts on Control Societies* Gilles Deleuze defines a chronological period after modern age that is neither established on the central control of the sovereign nor on the decentralized control of the prison or factory. Deleuze suggests that in the Twentieth century we have moved away from a disciplinary society to a more pervasive society of control. These societies of control are in the process of replacing disciplinary societies, which means that disciplinary institutions are still present, however their authority is no longer confined to particular institutions. Power is becoming assimilating into every aspect of social life by way of increasingly interconnected networks.

Disciplinary practices mold the behaviors of individuals, whereas networks of control modulate their interactions. Discipline operates by segregating and fixing, whereas modulation operates by integrating and organizing differences; "like a self-deforming cast that will continuously change from one moment to the other, or like a sieve whose mesh will transmute from point to point".<sup>xvii</sup> Furthermore Deleuze notes we no longer find ourselves dealing with the individual and the mass anymore, such as was imperative in disciplinary societies – the signature that designates the individual, and the number or administrative numeration that indicates his or her position in the mass. In order to control the masses bureaucracy – the management form in disciplinary societies - constitutes those over it exercises power into a body and molds the individuality of each member of the body. In the society of control the individuals have become 'dividuals', and masses, samples, data, markets, or banks.

Deleuze observes the corporation to be the replacement of the factory – a body that balanced between the highest possible in terms of production and the lowest possible in terms of wages. The corporation extends to all levels of social life, it is a spirit, a gas; "if the most idiotic television game shows are so successful, it's because they express the corporate situation with great precision" moreover, "perpetual training tends to replace the school, and continuous control to replace the examination. Which is the

surest way of delivering the school to the corporation.”<sup>xviii</sup> Marketing has become a paradigmatic postmodern process; it is “the center or the ‘soul’ of the corporation.”<sup>xix</sup> The paradigmatic form of modulation concerns the control of money, specifically when the gold standard was replaced by floating exchange rates. Corporations no longer exercise capitalism for production but for the product, in order to sell or market it; “what it wants to sell is services but what it wants to buy is stock.”<sup>xx</sup>

The effects of this shift are problematic; on the one hand scientific and economic competition has elevated western society rapidly, however, as noted by Jameson and Baudrillard contemporary society lacks depth, rejecting models that explained people in orders. Contemporary marketing strategies are not longer about the product; marketing promotes a way of life, and ultimately the images do not in any way signify its basic reality: the product.<sup>xxi</sup> Furthermore, the control society produces a horizontal network and thus differences, hierarchy and social order are all becoming integrated in the flat interconnected networks. This also indicates that now the object of policing has become life itself, because historically the police include everything. However, as large corporations are outgrowing governmental institutions, the object of control is increasingly turning into a form of consumer surveillance.

Technological advancement and the convergences of media currently allow virtually all portable devices to become tools of surveillance. Gerard Goggin for instance observes that the growing use of RFID technologies, small wireless devices which can be embedded in all sorts of everyday objects to be communicated with by a network.<sup>xxii</sup> This can then be used in every library book, and then pinged to find out their location. Or product lines in a supermarket could communicate to a central server and database when they were about to run out and needed restocking.<sup>xxiii</sup> But the technology can also be used to track, trace and control human life. Terrorist threats and the conclusive awareness of vulnerability and feelings of insecurity and suspicion, have contributed to the enormous need for identification methods. Tracking and tracing are becoming increasingly important issues. Confirming (identification) or controlling (authenticating) someone’s identity can be done on basis of what someone wears (for instance an ID-card), what someone knows (for instance a password or Pincode), or what someone is (identification on basis of unique body features). The last method is called biometrics. From a particular body part the proportions are measured and converted to a unique template, a pattern or number which distinguishes individuals from one another.<sup>xxiv</sup> Connecting one’s identity to physical traits and measuring and tracking them may lead to and infringement on privacy.

Locative Media technology enables tracking and tracing, but what this biometrics points out is that living human bodies have become quantifiable, recordable and enumerable codes. Quantification of living forms in the near future may allow collaborative filtering techniques (a form of modulating people distinct from modulation in disciplinary societies) to advance to a state where shopping mall or public streets become pools of adverts that can be personalized according to ones profile and according

to present location, such as portrait in the film *Minority Report*.<sup>xxv</sup> GPS enabled wireless devices, such as ones cell phone, currently allow for personalized data to be sent to its user in the form of Location Based Services. When a personal profile – set up by the user via a survey, or based on the user history – is coupled to a pool of other profiles supplied by other users, then statistical algorithms can suggest other likes and dislikes, based on the similarity of ones profile to other user profiles in the pool. Consequently the user may be sent an advert when he or she is in near proximity of the product or service that is in accordance with the user's taste. However the algorithms determine and modulate the identity of the user; because the filtering technique is based on selecting data from a closed space – the profile pool – rather than from exterior data sets, there is no improvement in the overall data pool, hence it ensures structural homogeneity.<sup>xxvi</sup>

### **Distributed network**

In order to understand issues concerning globalization, mobility, ubiquitous computing, and the role of Locative Media, it is imperative to outline effects of the distributed network, as it lies at the root of postmodern society. Facilitated by technological, economic and political developments, a distributed network is currently establishing in society and pushing aside older forms of centralized and decentralized networks. It is a network diagram with no central hubs and no radial nodes; instead each entity is an autonomous agent. This enduring shift towards distribution is recognized and documented in diverse texts from multiple disciplines such as sociologist Manuel Castells, Deleuzian Hakim Bey, and forms the basis of much contemporary critical literature in politics, media studies and philosophy.

### **Diagram**

In *A Thousand Plateaus* Deleuze and Guattari describe the rhizome - a horizontal meshwork derived from botany – as heterogeneous and connective; any point can be connected to anything other.<sup>xxvii</sup> When the distributed network is diagrammed it is pertinent to the rhizome. The rhizome – and with it the distributed network – is exemplar of our postmodern society, as it has complete disregard for depth models, or procedures of derivation; it “is a stranger to any idea of genetic axis or deep structure.”<sup>xxviii</sup> Furthermore rhizome operates by variation, expansion, conquest, capture, offshoots. It is an acentered, nonhierarchical, nonsignifying system without a General and without an organizing memory or central automation.<sup>xxix</sup> The distributed network structure can be described as that of the rhizome diagram as it links many autonomous nodes together in a manner that is neither linear nor hierarchical. Both the US interstate highway system and the Internet, which began as a project of DARPA (the U.S. Defense Department Advanced Research Projects Agency), are examples of a

rhizome structure. The design allows, in both the interstate highway and the Internet, to facilitate mobility and communication in case of war.

The distributed network is part of a larger process of postmodernization that is happening all over the world. The distributed network, which facilitates possibilities for an open society, does not automatically lead to more democracy and independency; it lends itself to surveillance as well as liberty, to new forms of manipulation and covert control as well as new kinds of participation, to skewed, unjust market outcomes as well as greater productivity. Even more so, the controlling authority that is spread throughout the network extends to all aspects of social life, and thereby allows large corporations to impose a common ideology, ultimately creating a universal way of life/consumption. The control society, as outlined above, results from the distributed network.

The distributed network succeeds the decentralized network and, in part, the centralized network. The latter can be described as the simplest network diagram, as it operates from a single authoritative hub. Centralized network diagrams are hierarchical, such as Bentham's panopticon, as described in Foucault's *Discipline and Punish*: a guard - "a continuous hierarchical figure" - is at the center of many radial cells, each with one prisoner.<sup>xxx</sup> Another example of a centralized network is the American judicial system - "while there are many levels to the court system, each with its own jurisdiction, each decision of each court can always be escalated to a higher level in the hierarchy. Ultimately, however, the Supreme Court has final say over all matters of law."<sup>xxxi</sup> A decentralized network is a multiplication of the centralized network; instead of one hub there are many, each with its own array of dependent nodes - such as the airline system. "Decentralized networks are the most common diagram of the modern era."<sup>xxxii</sup>

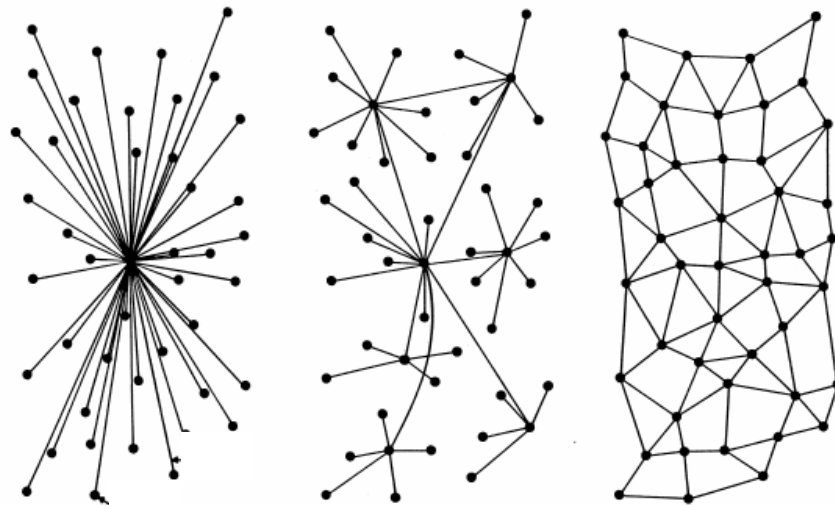


Image 2.1 Centralized, Decentralized and Distributed Networks

**Control**

One might argue that the distributed network – and with it the globalization of capitalist production and exchange – means that economic relations have become more autonomous from political controls, and consequently that political sovereignty has declined. One might say the distributed network ‘era’ is a liberation from the capitalist economy and the restrictions and distortion political forces have imposed; allowing both citizens and workers to influence and contest power. In *Empire* Michael Hardt and Antonio Negri assert in step with the process of distribution, the sovereignty of nation-states, while still effective, has progressively declined; even the most dominant nation-states should no longer be thought of as supreme and sovereign authorities, either outside or even inside within their borders.<sup>xxxiii</sup> However, Negri and Hardt argue, the decline in sovereignty of nation-states does not mean that sovereignty as such has declined – whilst the distributed network is integrating in contemporary society, political controls, state functions, and regulatory mechanisms have continued to rule the realm of economic and social production and exchange. The hypothesis Negri and Hardt put forward is that sovereignty has taken a new form, composed of a series of national and supranational organisms united under a single logic of rule: ‘Empire’. Empire is constituted by a monarchy (the United States and the G8, and international organizations such as NATO, the IMF or the WTO), an oligarchy (the multinational corporations and other nation-states) and a democracy (the various NGOs and the United Nations). They define the society of control as that society “in which mechanisms of command become ever more democratic, ever more immanent to the social field, distributed throughout the brains and bodies of the citizens.”<sup>xxxiv</sup> Empire is a deterritorializing apparatus of rule that progressively incorporates the entire global realm within its open, expanding frontiers. Empire manages hybrid identities, flexible hierarchies, and plural exchanges through modulating networks of command.

In *Protocol: how control exists after decentralization* Alexander Galloway relates Empire to new media, stating that the computer protocol is in lockstep with Negri and Hardt’s analysis of Empire’s logics, particularly the managerial economy of command.<sup>xxxv</sup> The command protocol Galloway refers to is what Negri and Hardt describe as the third mode of imperial command, which knows from the start that “contingency, mobility and flexibility are Empire’s real power.”<sup>xxxvi</sup> Galloway asserts that the distributed network, whether in technological or social form, is a sign that society is undergoing a change in episteme. Protocol is what guides this change, from the underlying structure of the Internet to Web form, to current developments in biotechnology. Galloway discusses how protocol is a management style for ‘life itself’. The key to this statement is that life has become a matter of information, and can thus be controlled protocologically. Galloway connects protocol to Deleuze’s notion of control and Foucault’s concept of biopower and biopolitics as they deal with the manner in which ‘life itself’ is made analyzable and controllable from a distance. Protocological

control, Galloway writes, mirrors the movements of Empire: “one might say that Empire is the social theory and protocol the technical.”<sup>xxxvii</sup>

Protocol should not be understood metaphorically, and thus should not be an object of mere 'interpretation'. Central is that the materiality of code should be recognized. “The ‘information age’ – a term irreverently tossed to and fro by many critics of contemporary life – is not simply that moment when computers come to dominate, but is instead that moment in history when matter itself is understood in terms of information or code.”<sup>xxxviii</sup> Galloway's materialist approach allows him to refer to and build upon Marx and the neo-Marxists (Adorno, Horkheimer, Enzensberger), and like Marx's vitality of capital, discuss how life itself (DNA) has become encoded and is also a matter of protocol. The importance of this dialectic, for Galloway, is that it makes possible a new form of modulating, ‘protocological’ control, distinct from the institutional and discursive form uncovered by Foucault – the collaborative filtering example is a form of this protocological power. The distributed network (diagram) may appear to less governable than the centralized or the decentralized, but control resides in the code, and more specifically in the cultural forms/protocols of usage as well as in standards set (via RFC's). Resistance is futile (protocol is akin to gravity), for one must participate or be shut out. Even if one were to think of hacking as a form of resistance, their work strengthens protocol by showing exploits and encouraging fixes. Thus ultimately one must work within the protocological system, sculpting rather than rejecting.

Protocological control is different from the institutional power seen throughout disciplinary societies in the sense that its users are enthused to conform to the suggested organization and are able to fine-tune the system. Participatory contributions and feedback allow protocol to advance. The city relates to protocol in the sense that it presents a protocol in various forms to which its inhabitants may and sometimes have to conform. The example of commercial navigation systems offering alternative routes is protocological; the technological surveillance structure embedded in the city roads that direct the flow of traffic, as in the case of Los Angeles, is not. A good case of protocological organization can be seen in school districts. In order to keep as many automobiles out of the area, speed bumps are placed throughout the streets. The speed bumps request persons to drive really slowly in the proximity of the school; if they do not do this they will risk material damage to the car. This will make drivers choose not to take routes through school districts. So, instead of telling persons not to enter a particular area, they are requested politely to take a different path. Surveillance systems, on the other hand, are not protocological as they compel the driver to slow down. Similarly wearing a uniform to school is not protocological whereas following fashion is; it is not required to wear branded sport shoes and stop wearing them a season later, however, one may be socially excluded from peers when choosing not to conform to the convention. Likewise, fashion is protocological because consumers are able to influence its form, for instance by means of fashion statements.

Moreover, cities have become very complex; a wide range of cultural diversities, people, buildings, and urban situations, however, its public seems to be treading the same path every day. Films like *Koyaanisqatsi* illustrate the routine of everyday practices (as it corresponds with industrialization and modernity), more recently Amsterdam Real-time shows the traced movements of people in Amsterdam; people seem to be directed in customary routes. One can reason that most of our cities are so thoroughly unpleasant because they are designed in a way that either ignores the emotional impact on people, or indeed try to control people through their very design.<sup>xxxix</sup> In addition there is communication; currently public space, for instance in the street, is filled with corporate adverts, logos and brand names. This spectacle of signs is a one-way communication flow; citizens cannot have a say, in fact when they do, for instance in the form of graffiti or culture jamming, they risk punishment. There is no room for comments, feedback, and consequently no 'bottom-up' improvement. But, because of the annotating quality, Locative Media may allow new protocological forms to emerge that may lead to a more grass-rooted decision making and a two-way communication flow; gazing, social interaction, and collective intelligence. In *The Locative Commons* Marc Tutters refers to the .walk (dot-walk) project, which combines computer code and 'psychogeographic' streetwalking. During the walk, participants carry out an algorithmic series of instructions derived from computer code that calculates the city as a giant 'peripatetic computer'.<sup>xl</sup> "It may seem amazing that such a simple idea can even be considered software, but the concept behind it is the clever part, based, as it is, on a metaphor for how order emerges from chaos, borrowed from the ant colony, which generates maps through the brute force, random exploration of a territory."<sup>xli</sup>

Locative Media practices are protocological in various ways, such as the technical code that allows the technology to communicate and be visualized, but also as illustrated in the dot walk project in the sense that the projects transform urban space into a canvas, game field, or a museum, allowing the users to look beyond facades, interact with public space, peers, and non-users. Furthermore the practice offers and creates a hybrid map that directs publics 'voluntarily' and offers possibilities for users to contribute. I will elucidate this point in the following chapters, first I wish to sketch out geographic and social consequence of increased mobility and the information economy. This is imperative in understanding motives for Locative Media practices to employ potentials for countervailing, criticizing and reforming politicized, commercialized and privatized public space.

### **Consequence on locality**

In *Empire* Negri & Hardt assert one major consequences of the passage from an industrial to an informational economy to be a dramatic decentralization of production. The processes of modernization and the passage to the industrial paradigm provoked the intense aggregation of productive forces and mass migration of labor power towards

centers that became factory cities, such as Liverpool, Eindhoven and Detroit.<sup>xlii</sup> The efficiency of mass industrial production depended on the concentration and proximity of elements in order to create the factory site and facilitate transportation and communication. The informatization of industry and the rising dominance of service production, Negri & Hardt continue, have made such concentration of production no longer necessary. “Advances in telecommunications and information technologies have made possible a deterritorialization of production that has effectively dispersed the mass factories and evacuated the factory cities.”<sup>xliii</sup> Because communication and control can be exercised efficiently at a distance, and immaterial products can be transported across the world with hardly any delay and expense, production services can now be coordinated in such a way that factories can be dispersed to various locations – in countries with a lower wage or a higher expertise level. In some sectors the factory site itself becomes obsolete and withdraws, Saskia Sassen writes in *The Global City*, as its workers communicate exclusively through new information technologies.<sup>xliv</sup>

Global cities are strategic sites for the combination of resources necessary for the production of these central functions.<sup>xlv</sup> Thus, Sassen argues, much of what is liquefied and circulates in digital networks and is marked by hyper-mobility, actually remains physical in some of its components. At the same time, Sassen continues, that which remains physical has been transformed by the fact that it is represented by highly liquid instruments that can circulate in global markets. Institutional buildings used to symbolize a site specific establishment, however, digital networks have shifted their authority globally, hence the building is not what is represented. As illustrated by Negri and Hardt, institutional powers are integrating in the global network; financial services, the exchange of products, and the controlling authority have become widespread throughout the global network, former centers of control are now segmented accordingly, what remains are meaningless physical representations of former institutions of power: *big old buildings*. However, there are other more destructive traits to be observed in postmodern cities, which I will touch upon in the next section.

### **From Fordism to McWorld**

The passage to the informational economy has resulted in the assembly line to be replaced by *the network* as the organizational model of production, “transforming the forms of cooperation and communication within each productive site and among productive sites.”<sup>xlvi</sup> Furthermore, the information networks also allow territorial restrictions to disappear as they tend to put the producer in direct contact with consumer regardless of the distance between them, even facilitating possibilities of consumers to turn into producers. However, these tendencies toward the deterritorialization of production and the increased mobility of capital are not absolute, and there are significant countervailing tendencies, but to the extent that they do proceed; Negri and Hardt write “they place labor in a weakened bargaining position.”<sup>xlvii</sup> The informatization

of production and the increasing importance of immaterial production have resulted in perhaps 'the death' of the Fordist organization of industrial mass production – where resources and capital were bound to specific territories and consequently with a limited labor force/population. In the current network organization model of production, factory plants, resources and capital can move its site to another point in the global network, thus forcing laboring populations to work for a lower wage or ultimately relocate to such a population. In consequence entire labor populations, which at one time benefited from certain stability and contractual power, are now in an uncertain employment situation and taking such jobs as freelance work, part-time work, home work and piecework.

Various films and literature illustrate the decentralization and global dispersal of processes and sites, which as discussed by Negri & Hardt is characteristic of postmodernization or the informatization of the economy. *Roger & Me*<sup>xlviii</sup> is one of the first films to document the downsizing of corporations, and outsourcing of jobs to developing world nations. The film depicts the negative economic impact of General Motors CEO Roger Smith's summary action of closing several auto plants in Flint, Michigan, and opening new plants in Mexico - a prime example of outsourcing - costing 30,000 people their jobs and economically devastating the city. At the film's climax, Moore confronts Smith at the chairman's annual Christmas message. Smith is shown espousing about generosity during the holiday season, concurrently as Sheriff Fred Ross evicts more families.<sup>xlix</sup>

Similar concerns regarding employment preservation are discussed in *Jihad vs. McWorld* Benjamin Barber. Barber discusses the rebellion of embattled peoples and cultures worldwide against the imposition of aggressive Western mercantilism, which he names McWorld.<sup>1</sup> With regards to downsizing and outsourcing – both clear consequences of postmodernization - Barber notes, "Although full employment is a public good, it is not a corporate good. Business efficiency dictates downsizing; capital-intensive production means labor-minimizing job policies. [...] Government has a duty to intervene in the economy in the name of justice, ecology, strategic interests, full employment or other public goods in which the market has, and can have, no interest." [...] But "full employment and environmental preservation are social goods, not private goods. From the constrained short-term perspective of capitalist efficiency, citizenship, ethnicity and job status are at best irrelevant, at worst obstacles to be overcome." The bottom line is that multinational corporations have outgrown governments, and ostensibly dictate world order. Capitalization and democracy have become noticeably contradiction in terms. Capitalism is a corporate ideology that is sold to the public under tags akin to *freedom of speech, liberty and emancipation*. However, what corporations in reality are after is dictating thought, enforcing their products and business efficiency.

Barber avows that the information arm of international commerce's sprawling body "reaches out and touches distinct nations and parochial cultures, and gives them a common face chiseled in Hollywood, on Madison Avenue, and in Silicon Valley."<sup>li</sup> Benjamin discusses how globalization and the corporate control of the political process –

'McWorld' - conflicts with tradition and traditional values, often in the form of extreme nationalism or religious orthodoxy and theocracy – 'Jihad'. Scientific progress, Benjamin states, embodies and depends on open communication, a common discourse rooted in rationality, collaboration and an easy and regular flow and exchange of information. These ideals "can be hypocritical covers for power-mongering by elites, and they may be shown to be wanting in many other ways, but they are entailed by the very idea of science and they make science and globalization practical allies."<sup>lii</sup> The domination of American cultural products all over the world exemplifies how information-technology assists homogenization and Americanization; "What is the power of the Pentagon compared to Disneyland? Can the Sixth Fleet keep up with CNN? McDonald's in Moscow and Coke in China will do more to create a global culture than military colonization ever could. It is less the goods than the brand names that do the work, for they convey life-style images that alter perception and challenge behavior."<sup>liii</sup>

Benjamin's critical view with regards to the effect of information technology on culture and the dominating power integrated in the network is interesting as they date from the early nineties, in a period where the Internet was not commercially integrated in society. Now more than a decade later, Benjamin's study on the face of it is more up to date than ever before; all over the world institutions of confinement are in the process of breaking down, and increased mobility, the global city and the Internet assist new forms of emancipated engagement – which I will further explore in chapter 3 - and Locative Media, as it holds ties with these traits, may increasingly be of importance. On the other hand, as Benjamin points out, the world seems to be in the process of homogenizing and America seems to be a marketer, advertising a dream, and eventually selling rights to consume their outsourced products and Locative Media may facilitate this process equally – in the sense that what we experience as the local because locally-sited, is actually a transformed condition in that it is imbricated with non-local dynamics or is a localization of global processes.<sup>liv</sup> Before explaining this last statement and relating it to hyper-reality, I want to explore homogeneity in the city. Naomi Klein has written extensively on the subject in *No Logo*, which takes an anti-corporate, anti-globalization stand, arguing that multinational corporations have become so big that they have superseded governments and have become the ruling political bodies of our era.<sup>lv</sup>

### **Homogeneity**

Klein refers to destructive franchise strategies of corporation such as Wal-Mart and Starbucks exploit economy of scale by setting prices sufficiently low so that no small retailer can compete, small communities find that their lively downtown streets die. Klein argues that the emphasis of multinational corporations has shifted over the last 15 years from producing products to producing brands. Large corporations such as Nike and Levi Strauss do not actually focus on manufacturing, rather they focus on marketing. Phil Knight (CEO Nike) has said: "There is no value in making things any more. The

value is added by careful research, by innovation and by marketing.”<sup>lvi</sup> Nike has shifted their focus on children, as they represent a large market segment and influence peers – namely their class mates “if you sell to one, you sell to everyone in their class and everyone in their school”.<sup>lvii</sup> Nike promotes ‘coolness’, and being ‘cool’ has become a central paradigm in contemporary youth culture. In order for Nike to maintain cool respectability, the company has employed ‘cool-hunters’ who roam ghetto’s, basketball fields, and poor neighborhoods in order to pick up styles that characterize a cool profile.<sup>lviii</sup> Interestingly the ‘lower-class’ income group have become the voice of urban culture – and this is different in a disciplinary society, where the cultural industry dictates products from a centralized market and leaves no room for diversity and niche markets; from this perspective a few multinationals decide creativity and smaller producers, if they want to survive, need to work according to the leading formula.

In contemporary urban culture the youth are able to influence the industry on multiple levels, because multinationals are continuously searching for new ways to promote their products, new forms of engagement are embraced and diversity is used as a means to promote new meanings and create fetishism; ‘black = cool’. Tommy Hillfiger, Klein states, has turned ghetto-coolness into an exact science, leading to a mass marketing formula that has since been imitated by Polo, Nautica, Muningswear and other fashion companies. Central in adverts of Hillfiger is multi-cultural youth dressed in upper-class outfits with an American flag at the background, articulating the American Dream – ordinary people who have become successful. For Afro-Americans the brand signifies the wealth ‘white America’ embodies, and for white Americans the brand stands for the ‘black style’. Essentially what the phenomena of the cool-hunter imply is that society has become a multi-cultural and the city represents the mishmash of diversity. In order to maintain control over the splintered market corporations have come up with out of the ordinary and creative techniques to reach maximum target group – in this case consumer surveillance.

What Tommy Hillfiger’s marketing strategy aptly demonstrates is how the seductive machinery of multinationals changes variation into a widespread ordinary; poor minorities are promoted as cool to middle class youth, by attaching expensive logo’s to their style. The clothes no longer signify particular meanings, habits or local brands; its only reference is an image that is constructed by multinationals in order to sell bulk. In return both the minority and the mass lose depth; the minorities with their own distinct style, at times representing background and culture, are sold off and homogenized and the upper middle class, who have the ability to elevate society, are essentially downgraded. Following Jameson and Baudrillard the representing images – logos – devour the reality. Moreover, the deterioration of cultural difference by globalization, increased distribution and emphasis on image illustrate a shift in hierarchy, class difference and authority as they become horizontally distributed, and thus lack depth, becoming superficial and rejecting models that explained people and society in orders.

## COUNTERVAIL

The new proletariat will only free itself by uniting, by decategorizing itself, by forming alliances with those whose work is similar to its own, by bringing to the foreground the activities they have been practicing in shadow, by assuming responsibility – globally, centrally, explicitly – for the production of collective intelligence.

- Levy, *Collective Intelligence* (1997)

As noted by Baudrillard and Jameson the city is bombarded with images that constantly remind us the American Dream to be realizable. Currently the images that cover our public space are corporate messages, marketing an illusion, and keeping the public distracted from a frightening truth – poverty, corruption and decay. Whilst this spectacle is happening and new images emerge that are build forth from previous ones, to which different meanings are assigned, our society is losing touch with reality; contrasting interpretations and meaningless signs lead to conflict and cultural clashes. Furthermore, mass production, mass reproduction, increased mobility and distribution lead to homogeneity and a shift in control from local to global. “The world has changed in a big way. Over the last decade, there has been a massive redistribution of the world’s resources, with everyone except those in the very highest tier of the corporate elite...getting less.”<sup>lix</sup> Locative Media may be capable to form intelligent collective alliances in order to actively tackle these forms of power and ultimately give some back to the people.

In *The Practice of Everyday Life* Michel de Certeau examines the ways in which people individualize mass culture by altering functional objects to street plans, to rituals, laws, and language in order to make them their own.<sup>lx</sup> De Certeau argues consumers actually act as producers within society using the established vocabulary, and have the power to transform submission into subversion. He makes reference to Indians who appeared to be submissive to their Spanish colonizers as they did not reject or alter the rituals, representations, and laws that the Spanish imposed, however in reality the Indians did resist by subversion; by changing the interpretation of these rituals and silently altering its original meaning. Following de Certeau, in contemporary society elements can be found that can be used by means of tactic to “capitalize on its advantages, prepare its expansion, and secure independency with respect to circumstances.”<sup>lxi</sup> Often de Certeau’s notions of tactics are related to ‘tactical media’, a type of activism that uses media in a creative manner that falls outside its practices, creating resistance through difference; not a frontal assault on an external power, but rather a temporary infiltration from the inside through actions of thievery, take over, hoaxes and pranks.

“Tactical Media are what happens when the cheap ‘do it yourself’ media, made possible by the revolution in consumer electronics and expanded forms of distribution

(from public access cable to the internet) are exploited by groups and individuals who feel aggrieved by or excluded from the wider culture. Tactical media are media of crisis, criticism and opposition.”<sup>lxii</sup> Tactical media can therefore be described as the bottom-up struggle of the networks against power centers; attempting to reverse the one-way-flow of communication and power in order to give some of the control back to the public. The projects are often a mix between art and activism; therefore many of its origins can be traced to various art movements. Although the projects work through many different mediums, tactical media often have a high visual value, adding to its ‘spectacle’ and reinforcing its artistic origin.

There are, however, some differences to be noted concerning the theory of tactical media and that of de Certeau. The latter was about making tactics a silent production by reading and consuming the signs without altering the original source, whereas tactical media has shifted this emphasis to a form of active media production, such as shown in the billboard pirating by Adbusters, RTMark's mock websites for G.W. Bush and the World Trade Organization, and con-artists on 0100101110101101.org. Tactical media practices are often compared to cultural jamming, in the sense that both use techniques to occupy the public space controlled by mass media. However, cultural jamming differs as it is a response to the dominant practices within the media, whereas tactical media uses this dominant practice in order to infiltrate it and ultimately become part of it. For this reason tactical media will never reach a state of perfection; a successful tactical media project or group will be replaced by a similar cycle that attacks it again, it therefore constantly needs to question the system under which it operates.<sup>lxiii</sup>

Similar to the object of tactical media this chapter will examine those phenomena that are able to exploit flaws in the city and corporate control, not to destroy the city, but to shape space and make it better suited to people’s real needs. I will revisit theorists and practices that opposed the dominant consumer society.

### **Reevaluating the Society of the spectacle**

In *No Logo* Klein refers to Rodriguez de Gerada a widely recognized, skilled and creative founder of culture jamming - the practice of parodying advertisements and hijacking billboards in order to drastically alter their messages.<sup>lxiv</sup> Klein explains his motives:

Streets are public spaces, ad-busters argue, and since most residents can't afford to counter corporate messages by purchasing their own ads, they should have the right to talk back to images they never asked to see. In recent years, this argument has been bolstered by advertising's mounting aggressiveness in the public domain - painted and projected onto sidewalks; reaching around entire buildings and buses; into schools; onto basketball courts and on the Internet. At the same time, the proliferation of the quasi-public ‘town squares’ of malls and superstores has created more and more spaces where commercial messages are the only ones permitted. Adding even greater urgency to their cause is the belief among many jammers that concentration of media ownership has successfully devalued the right to free speech by severing it from the right to be heard.<sup>lxv</sup>

Rodriguez de Gerada wants the dialogue he has with the city's billboards to be interpreted as a normal mode of discourse in a democratic society, not as some edgy vanguard act.<sup>lxvi</sup> His work is based on lifting an image, message or artifact out of its context to create a new meaning. De Gerada's culture jamming practice has its roots in Guy Debord and the Situationists. Culture jammers make substantial use of the avant-garde art movements of the past; from Dada and Surrealism to Conceptualism and Situationism. These movements were attacking the art world and its passive culture of spectatorship, as well as the anti-pleasure ethos of mainstream capitalist society.

In *Society of the Spectacle* Guy Debord outlines in 220 theses consumer society; "In this society, the individuals consume a world fabricated by others rather than producing one of their own." Debord argues that to the extent that one is consuming the prepackaged culture others produce, one can not produce its own. Choice and thought are done by corporate elite, who in the end are making everyone passive, uncritical, dull and uncreative.

Understood in its totality, the spectacle is both the result and the project of the dominant mode of production. It is not a mere decoration added to the real world. It is the very heart of this real society's unreality. In all of its particular manifestations — news, propaganda, advertising, entertainment — the spectacle represents the dominant *model* of life. It is the omnipresent affirmation of the choices that have *already been made* in the sphere of production and in the consumption implied by that production. In both form and content the spectacle serves as a total justification of the conditions and goals of the existing system. The spectacle also represents the *constant presence* of this justification since it monopolizes the majority of the time spent outside the production process.<sup>lxvii</sup>

Debord's analysis of the stage of social organization is a mutation of capitalist organization, however, still applicable to a Marxist interpretation.<sup>lxviii</sup> The society of the spectacle is still a commodity society, with production at the basis of its organization, though it is reorganized to a higher and abstract level. On the surface 'spectacle' relates to a media and consumer society, one which is centered on the consumption of images, commodities and spectacles. Related to Baudrillard, on a deeper level 'spectacle' refers to the complex institutional and technical apparatus — the means and methods power, force and manipulation are used to delegate passive subjects in contemporary capitalism. Consequently all democratic institutions, cultural artifacts, urban architecture, media and art are an integral component of the 'society of the spectacle'.

Following Gramsci, the Situationists saw the current form of social control as based on consensus rather than force, as a cultural hegemony attained through the metamorphoses of the consumer and media society into the 'society of the spectacle'. The emergence of Guy Debord and the Situationist International can be interpreted as an attempt to update and emancipate the Marxian theory and practice to historically specific conditions in the French post-World War Two conjuncture, which in itself was

influenced by French modernist avant garde movements.<sup>lxi</sup> Next to Dada, surrealism, lettrism Debord and the Situationist International initially shaped the French avant garde milieu in an attempt to merge art and politics.<sup>lxx</sup> In contrast to traditional Marxian ideology, which focused on production and the factory, the Situationists concentrated on social reproduction and the transformation of the city and everyday life. Furthermore they highlighted the importance of new modes of the consumer and media society that had developed since the death of Marx. Central in their observation was the production of space and constitution of society.

Whilst disciplinary institutions are disappearing and consumers are enthused to actively engage in the cultural and political movement, the society of the spectacle remains evident in contemporary society. The university, for instance, involves around a variety of public assemblies, sports, dorms, fraternity and rituals that indoctrinate individuals into representatives of the dominant ideology. Classical education standards involve learning and being examined on memorized facts that are selected and controlled by teachers – hierarchical authority in command – thus affecting creativity and elation. Furthermore corporate brands have moved into university. Naomi Klein names several examples, such as Barnes & Noble replacing campus-owned bookstores, Taco Bells and Pizza Huts replacing university cafeterias, and Coke or Pepsi being campus exclusive rights.<sup>lxxi</sup> Moreover Nike pays college coaches as much as \$1.5 million in sponsorship fees and university research has become heavily dependent on corporate funding.<sup>lxxii</sup> Universities have become corporate research centers and students are enslaved by corporate multi-nationals, essentially making universities simulation for both students and products. University in particular – with their dorms, libraries, green rooms and the open mind set for respectable dialogue – is what Klein views as a space that should remain uninfected from marketing and spectacles, as they are proof of an authentic public place – just as national parks are being conserved.<sup>lxxiii</sup>

Debord argues capitalist production has unified space and homogenized place. The spectacle has entered and infected urban space. Capitalist production and city streets are amalgamated; busses have become driving billboards, corporate logo's fill facades and even 'the eye in the sky' – a zeppelin used by the NYPD during demonstrations - is sponsored.<sup>lxxiv</sup>

Capitalist production has unified space, breaking down the boundaries between one society and the next. This unification is at the same time an extensive and intensive process of banalization. Just as the accumulation of commodities mass-produced for the abstract space of the market shattered all regional and legal barriers and all the Medieval guild restrictions that maintained the quality of craft production, it also undermined the autonomy and quality of places. This homogenizing power is the heavy artillery that has battered down all the walls of China.<sup>lxxv</sup>

The free space of commodities is constantly being altered and redesigned in order to become ever more identical to itself, to get as close as possible to motionless monotony.<sup>lxxvi</sup>

While eliminating geographical distance, this society produces a new internal distance in the form of spectacular separation.<sup>lxxvii</sup>

The society that reshapes its entire surroundings has evolved its own special technique for molding its own territory, which constitutes the material underpinning for all the facets of this project. Urbanism — “city planning” — is capitalism’s method for taking over the natural and human environment. Following its logical development toward total domination, capitalism now can and must refashion the totality of space into its own particular decor.<sup>lxxviii</sup>

Debord argues that urbanism as a spectacle is a political tool which is used to pacify, depoliticize and stupefy social subjects, distracting them from revolting. Debord sees urbanism to be the most effective field of operation in preventing struggle. “The efforts of all the established powers since the French Revolution to increase the means of maintaining law and order in the streets have finally culminated in the suppression of the street itself. Describing what he terms ‘a one-way system’, Lewis Mumford points out that ‘with the present means of long-distance mass communication, sprawling isolation has proved an even more effective method of keeping a population under control’ (The City in History)”.<sup>lxxix</sup> The society of the spectacle are ruled by the dictating commercialized media industry and spread through the cultural mechanisms of leisure and consumption, services and entertainment. The Situationist project countervails the spectacular society by means of involving individuals to produce their own activities, collective practices and ultimately self-organization.

### **Society in ad-hoc**

The Situationist project confronts the current representative form of democracy by calling for more grass-rooted structure of self-organization. Cornelius Castoriadis explored the notion of self-organization by opposing autonomy to heteronomy, concluding that there is a relation between the degree of outside control and self-determinism; the more an organization depends on outside control, the more likely participation and involvement are limited. Castoriadis argues democracy constantly has to be reborn, filled with new content. According to Castoriadis this process in history has been the result of revolutionary movements opposing and tackling power, tearing down structure in time of crisis and demand renewal. In *Society in ad-hoc mode: decentralized, self-organizing, mobile* Armin Medosch builds forth on Castoriadis’ conclusion and notes that social progress begins with developments at the individual level and takes place not according to criteria imposed from outside, but based on each person’s abilities and possibilities in a process of active ethical self-reflection.<sup>lxxx</sup> Akin to Debord and the Situationists, Medosch asserts only a collaborative grass-rooted initiative can counter the media and technology powerful control mechanisms which keep individuals passive and serialized, watching and consuming, rather than acting and doing. Medosch explores if mobile and wireless media can be used for a project to renew

grass-rooted democracy and overcome paradigms of consumerism and broadcast media. The Internet has the potential to promote social progress, seeing that it provides access to information and cultural content, and more importantly its capacity for promoting the creation of social communities – and this differs in a disciplinary society. Now that the Internet is coupled with wireless technology – the unwiring of the network – it creates a ubiquitous network. Consequently protocological opportunities arise in the streets, parks, and squares offering new possibilities for activities, political confrontation and artistic expression.

Medosch exemplified this capacity by noting the ad-hoc mode with which the democratic globalization movement approaches spontaneous organization and mobilization. Medosch asserts we find ourselves at the beginning of a development towards an ad-hoc society in terms of communication technologies. The possibility of bandwidth to be ‘in the air’ everywhere and computational power to become ‘even’ cheaper allows for society to be less reliant on centralized planning in the near future because accordingly most things can be resolved locally. “Mobile telematics facilitates participatory citizenship and ad-hoc organization at local level. Between this local self-organizing level and the national level, conference lines could be employed for democratic voting. Instead of amounting to an election every few years, politics could become a process integrated into the life of communities.”<sup>lxxxix</sup> Medosch refers to ubiquitous, unwired networks such as the free wireless network groups Consume.net in London, Freifunk.net in Berlin and Funkfeuer.at in Vienna, that demonstrate the potential of a decentralized, self-organizing network model.<sup>lxxxii</sup>

Mobile networks and affordable wireless devices allow for a base from which to act. The mass immigration from agricultural land to large cities in the industrial age, and the transformation of these same cities into cities of control, make urban space sort of new frontier zone where an enormous mix of people converge. Those who lack power, are repressed, or discriminated upon can gain influence and become present. This may imply there is a possibility of a new type of politics centered in new types of political actors. Digital networks are contributing to the production of new kinds of interconnections, which political activists can use for global or non-local transactions.<sup>lxxxiii</sup> Similarly new media artists have used computer-centered network technologies to enact political as well as in artistic projects, and bypassing corporate media or consumer firms, constituting an alternative and countervailing society. Consequently it is imaginable local initiatives to reshape the dysnified cities; on the one hand provocation for diversity may positively affect the homogenizing corporate machine, moreover, space can be reshaped when local initiatives and projects are able to be part of the distributed network *without* losing the specific character of locality. The streets by tradition are the stage for political and artistic statements, it is a space where individuality and local identity subsist, and thereby bear the true character of society. As mobile networks become part of daily life, the utilization can be an effective medium for counter movements gain a worldwide reach, to articulate a local issue. When employed

intelligently mobile networks, through SMS or via other practices, will not remain limited to the confined neighborhood; local user networks are able to interlink with international networks.

The effects of globalization, as outlined in chapter 2, are reason for people to demonstrate, organize rallies, marshal troops, and vote. With the wide-spread availability of cell-phones and the common SMS practice, these coordinated and collective practices become dependent on mobile technology. Forms of self-structuring social organization through technology-mediated, intelligent emergence can be identified in the notion of the Smart Mob - coined by Howard Rheingold in *Smart Mobs: The Next Social Revolution* the Smart Mob is an indication communication technologies will empower the people.<sup>lxxxiv</sup> The smart mob is a group of people that are in connection to each other and information through a network, allowing them to behave intelligently and efficiently, opposed to other forms of mob – which usually behave chaotically and unorganized. Smart mobs are characterized by social coordination.

Much has been written about the organizing role of cell phones in the demonstrations in the Philippines<sup>lxxxv</sup> that helped aid to overthrow the anti-democratic Estrada regime, or the ways in which SMS texting was instrumental in changing the fortunes of a presidential contender in South Korea.<sup>lxxxvi</sup> Similarly during Indonesia's 1998 student protests smart mobs helped bring down Suharto's dictatorship. Interesting is that six years after the initial euphoria about reformation and 'freedom' had lessened, Indonesian students were reported to still use SMS messages, reminding the people of the reformation targets that were set when Suharto was overthrown.<sup>lxxxvii</sup> However, the technology should not only be celebrated as a demonstrating of collective intelligence. Rheingold already noted issues of privacy, spam and criminal activity. Moreover there are numerous accounts of hoaxes and pranks that led to disturbances and conflict. For instance in the aftermaths of the tsunami disaster in Indonesia, numerous SMS rumors have sparked panics in different parts of the country, causing thousands to flee their homes for higher grounds.<sup>lxxxviii</sup> In addition there are various accounts of SMS being used to harass other people by sending them unsolicited messages. In Indonesia newspapers regularly tell of people receiving uncalled for messages, urging them to contact a ghost, a werewolf or a deceased relative.<sup>lxxxix</sup>

### **Locative Media**

In *Protocol* Galloway discusses the shaping role of hackers and tactical media. For Galloway, hackers personify the logic of protocol, always looking to better technology and opposing the anti-openness of proprietary software. The distributed network diagram of the Internet allows autonomous hackers to form specific task-oriented networks. This can be related to the accounts of collective intelligence and opposition through mobile technologies, as outlined in this chapter. The negative, almost terrorist, connotation associated with hackers is incorrect: Galloway claims they are pushing

technological capabilities to and beyond its limits; hackers are always seeking out the possibilities of technology and are an influential group for affecting change. Galloway discusses tactical media similarly and sees the phenomenon as indicative that trying to affect change from the sidelines is ineffective, it is better to engage directly with the power centers to deploy a positive desire. Locative media is currently in an investigational phase, however, when it has become established the deployment of hackers and tactical media to subvert or even break down power structures via augmented space can be expected.

Augmented space creates new meanings of old notions of space and place, artists can experiment with its possibilities and consequently push the technology further. Arts traditionally are considered a discipline that is acquired through obedience and effort. Because an artist puts his or her reputation on the line, the role of particular artists can be considered dependable reflections of society. Possibly they can formulate new forms of collective intelligence, one that countervails decay; performances that let particular meanings to enact local specifics in a global context. In the next chapter I will assess artistic practices that attempt to reform and improve the city.

## **REFORMATION**

The great power of the project is that it's absolutely irrational. And that disturbs, angers the sound human perception of a capitalist society. That is also a part of the project, this is the idea of the project, to put in doubt all the values.

- Christo

When we together with Baudrillard accept that sign systems have no relation to any type of reality outside that of the sign itself, art – a sign system par excellence – should distance itself from any claims of disclosure. In history many established certainties have been ascribed to art; for instance that art represents the progress of the human psyche; it improves and mirrors humanities collective mind; art is authentic and original; art is a useful tool to enhance social interactions. Furthermore, art can be grouped according to gradation (low art vs. high art), style, genre and quality. If these claims are considered to be false, than we live in a simulacrum of the third order; it is a sign system that mostly is busy with keeping up appearances, and consequently constantly produces new proofs – new art works – in order to mask the fact that there is no such thing as 'art'. Following Baudrillard one can argue that there is no decisive certainty about good and bad art, and all criteria distinguishing 'low' from 'high' art are obsolete, as well as the criterion determining what is art and what is not. Furthermore, there is no difference between something produced by an amateur or that by a professional. Authenticity in this sense is a fictive concept- all art essentially is an imitation of previous works. Thus, everything can be considered art.

In 1917 Marcel Duchamp signed a urinal with the pseudonym R. Mutt and shocked the art world. The sculpture was an attempt to point out that people look at the urinal as if it were a work of art, because Duchamp said it was a work of art. He referred to his work as 'Ready-mades'; by choosing an object, giving it a title and signing it, the object became the work of the artist. The Fountain and Duchamp's other works are generally labeled as Dada. Dadaism can be viewed as part of the modernist propensity to challenge established styles and forms, along with Surrealism, Futurism and Abstract Expressionism.<sup>xc</sup> From a chronological point of view Dada is located solidly within modernism, however a number of critics have held that it anticipates postmodernism, while others, such as Ihab Hassan and Steven Connor, consider it a possible changeover point between modernism and postmodernism.<sup>xcii</sup> For example, according to McEvilly, postmodernism begins with the realization that one no longer believes in the myth of progress, and that Duchamp sensed this in 1914 when he changed his modernist practice to a postmodernist one, "abjuring aesthetic delectation, transcendent ambition, and tour de force demonstrations of formal agility in favor of aesthetic indifference, acknowledgement of the ordinary world, and the found object or readymade."<sup>xcii</sup>

Following that anything can be considered art, during the late 1950s and 1960s artists such as Yves Klein in France, Charlotte Moorman, and Yoko Ono in New York City began experimenting with performance based works and moving art out of the galleries; changing the relationship between audience and performer especially. These performances were often designed to be the creation of a new art form, combining sculpture, dance, and music or sound, often with audience participation. The works were characterized by the reductive philosophies of minimalism, and the spontaneous improvisation, and expressivity of Abstract expressionism. During the same period - the late 1950s through the mid 1960s various avant-garde artists created Happenings. Happenings were mysterious and often spontaneous and unscripted gatherings of artists and their friends and relatives in varied specified locations. Often incorporating exercises in absurdity, physical exercise, costumes, spontaneous nudity, and various random and seemingly disconnected acts. Allan Kaprow, Claes Oldenburg, Jim Dine, Red Grooms, and Robert Whitman among others were notable creators of Happenings. In the Netherlands Provo organized happenings around the little statue 'Het Lieverdje' on the Spui in Amsterdam from 1966 till 1968.<sup>xciii</sup> Happenings are hyper-real situations; they reform and co-construct the appearance and context of the world for both participants and the outsider. Similar to a game happening on the street (i.e. children playing hide and seek, or police vs. robber) makes the game ground and rules blend in with all objects and non-participants; moreover, the hyper-real situation becomes part of non-participants and (temporarily) alters their behavior.

Throughout the beginning of the 21<sup>st</sup> century all over the world (mostly western wealthy countries) began experimenting with digital media, GPS, databases, portable devices and the Internet within the environment. There is a large body of projects and a variety of themes. Blast Theory and the Computer Chaos Club are commonly noted as pioneers in the field. Their experiments with art and games focuses on digital authoring within the environment, on a dynamic relationship between database and the world, and similar to experiments in contemporary art in the 1960s, offers the chance to take art out of the galleries and off the screen. Artistic practices in the field of Locative Media are about acquiring new ways of looking at everyday practices, places and people, and above all to engage not only in location but also in context. Locative Media creates hyper-real situations and is a way of escaping the daily routine, route and plot. Building forth from suppositions attained in the prior chapters I will assess the role of artists that make use of the technology, culture, and protocols to formulate collective reformation practices. The chapter will deal with artistic forms that can make the local, hidden and repressed present in the global network.

### **Reforming reality**

According to Baudrillard technology has affected all signs that at one time carried meaning: reproduction of signs – the endless repetition – makes each original, implied

meaning hollow, until there is a maze of contrasting meanings – after which the sign loses all meaning with the world outside the sign, and becomes part of a game of signs, which has no content except that it brings forward a certain sensation – like one day fly, a sound-bite, a blockbuster, or a match that is lit and goes out, till the next match is lit. This is evident in contemporary cities, a space in which signs, that encircle us and communicate to us, have no context. Misleading advertisements selling a sensation opposed to products, distorted news coverage, fake and pretentious facades; a tendency arises to think the truth does not lie somewhere in the middle, but that there is no truth expect the fact of unreliable signs. One of the reactions with concern to signs becoming meaningless, according to Baudrillard, is an omnipresent form of nostalgia. He observes in the western world a gigantic desire to the past, when one understood the world, and facts were undisputed.

When the real is no longer what it used to be, nostalgia assumes its full meaning. There is a proliferation of myths of origin and signs of reality; of second-hand truth, objectivity and authenticity. There is an escalation of the true, of the lived experience; a resurrection of the figurative where the object and substance have disappeared. And there is a panic-stricken production of the real and the referential, above and parallel to the panic of material production. This is how simulation appears in the phase that concerns us: a strategy of the real, neo-real and hyperreal, whose universal double is a strategy of deterrence.<sup>xciiv</sup>

This nostalgia amongst others has led to people recreating the past, for example the renovation of medieval cities and facades. Some inner city renovations in the Netherlands are done so picturesque that they seem to belong in a fairy tale; the precision of simulacra. The National Monument in Amsterdam dates from 1956. The monument is located on Dam Square which, together with most of its buildings, dates from the middle ages. In 1998 the monument had largely perished, and was completely rebuild. The current monument is an exact copy of its state half a century ago, the ornaments, figurines and victorious sculpted lions are resurrected in order to fit the medieval gothic tone. The monument was designed to suit the Dam Square sensation; the square is merely a space surrounded dated building facades – inside these buildings are new, even constantly up-dated, in order to meet the latest legal and fashion standards. Similarly the Burcht in Leiden, a medieval fort on an artificial hill, has constantly been renovated – not to enable its defensive and militaristic purpose, but to conserve its cultural historic value – however, the Burcht and its hill currently do not look anything like the initial design, it looks more like they were stylized by Anton Pieck (designer of Dutch amusement park the Efteling).

In addition, Leiden is the birth place of painter Rembrandt van Rijn. Frequently *Gilde Leiden* and *Storytrail* organize walks that pass by places familiar to Rembrandt. Such walks can be done at any particular time, however, what distinguishes these events is that they take place in a medieval setting; actors, musicians, artists and tour guides dress up in medieval customs, furthermore, the participants are required to partake in the hyper-real experience. To enhance the sensation participants of the

Rembrandtwandeling (which took place July 18<sup>th</sup> and 19<sup>th</sup> 2007) set-up by *Gilde Leiden*, were inquired to paint in front the house Rembrandt was born in, located on the Rembrandtplaats. This historical location nowadays contains many references to the painter; a sculpture (in color) of Rembrandt in front of an easel, a headstone mounted on a wall, a gable stone with details of the painter, and a street sign. When participants engage with the historic location by painting themselves whilst being surrounded with people dressed up in medieval customs, it becomes more real than real; hyper-real. The simulacrum integrates with the historic location; real and unreal are not significant.



**Image 4.1** On the right and on the left: *Gilde Leiden* organized a route that passed through famous places from Rembrandt van Rijn's life. The pictures are taken (by author) at the Rembrandtplaats, the birth place of Rembrandt. Children and adults are painting while being surrounded by artifacts and people dating from the middle-ages.

Similarly the Anne Frank house in Amsterdam has been kept intact with artifacts to create a sense for visitors of the time period. The building is not an office anymore as it was in World War II, it is a museum. The secret hiding place, where Anne Frank spent three years, has been conserved as how it was at the time she got arrested. In order to properly conserve the room, it has had to undergo treatment. In the case of the Anne Frank House, hyperreality has another function: ultimately to create awareness amongst visitors of the injustice that occurred at the given location. However, in most cases of hyperreal situations the only objective is a pleasurable experience. Since it does not matter how the sensation is caused, as long as it is created, legitimacy is not a relevant issue in the disneyfied world: a fake ski slope is just as valuable as one that is real; it is all about the skiing sensation. The indoor and outdoor ski slopes are decorated with entourage one would expect in Tirol or Salsberg am See; wooden chalés and 'fallen' tree logs to increase the sensation. The sensation might even be higher in an artificial environment, which would explain the popularity of these resorts. Similarly fake beaches

are immensely popular, such as Blijburg in Amsterdam, or the artificial tropical Palm Islands off the coast of The United Arab Emirates in the Persian Gulf.

Whilst cities are changing into museums, traditional museums seem to change into play gardens. Persons visiting a museum these days may run into groups of playing children and adults busy with a quest, while others are painting. Central is the experience. Significance in museums nowadays seems to have shifted from viewing rare objects or works of art in an academic context, to one of sensation. It is not the product of the sensation – the museum object – which is important, but the production, the sensation itself. The Royal Museum of Antiquity in Leiden, for instance, has changed into a funfair like circuit with its use of cardboard reconstructions of the past, temporarily giving the visitor a sense of ancient Egypt, Athens or Rome. The antiquities themselves have been reduced to mere properties of the ancient-experience.

In 2001 the Extra Faculteit (X-fac) from the Royal Institute of Arts (KABK) created a somewhat original bike tour through The Hague: a route which passed through various works of art which were not crafted by artists, but were identified and labeled as works of art by a group of students from the academy. The passage passed by places which for contemporary art enthusiasts would seem to contain elements of artistic treatment. For instance a location where the bricks in the road lay loose, making a rattling sound when biked over. This may just as well have been the cause of an artistic intervention, such as done in 'site specific art'. These projects implicate how at the beginning of the 21st century art and reality have come together and seem indistinguishable. In the case of X-fac the border between arts – a discipline which traditionally opposed reality in order to reflect upon it – and reality has vanished. The art became more realistic than real, and reality became poetic. The X-fac project attests the border between art and non-art is fading away, turning the city and everyday space into a museum. Labor towns, factories, hospitals, and even sewage systems have become objects for expositions, catalogs, and tour guides. At the same time artists are exploring possibilities outside the classical museum: theater performances taking place on specific locations, living rooms turning into exposition space, everyday sounds are integrated in music.

Artistic practices in the city space, where the creations are released from a fixed place, transforms the city into a collective social place, where new meanings are given to familiar spaces. Mobile and pervasive technologies can bring these projects to a new level and ultimately help us to gain greater understanding of the physical space we reside in. With the accessibility of the Internet in the 1990s artist began creating sociability in a virtual space that was disconnected from our reality, placing users in a simulated and 'unreal' world. Now with the widespread availability of mobile technologies artists may bring these multi-user and playful experiences to physical spaces, encouraging users to go out on the streets and bringing new meanings to familiar spaces.<sup>xcv</sup> Consequently making both users and non-users of cell phones and other Internet enabled devices real-time avatars.

### **Learning to gaze**

Dérive is a notion used by Guy Debord in an attempt to convince readers to revisit the way they looked at urban spaces. The concept means to aimlessly walk, or drift, through the city streets being guided by the momentum and space itself. The basic premise in Debord's theory of Dérive is that people are trapped in the practices of everyday life, by looking at the city by following their emotions they can break with their daily route, routine and enclosed space. Cities in fact are designed in ways to direct and control its publics. Cities are complex structures in which movement and mobility is managed by its plan, for instance road signs tell one where to go at what speed and where to not go between what times, when to stop and when to continue. But also the architecture controls the flow of people by means of the way in which certain areas, streets, or buildings resonate with states of mind, inclinations, and desires. Debord argues that people should explore their environment without preconceptions, in order to create a better understanding of one's nature; as one becomes aware of its location, one can value and comprehend his or her existence. The idea is that people built forth from their insights and seek out reasons for movement other than those for which an environment was designed. Bringing an inverted angle to the world can make people assign new meanings to familiar places, produce new forms of social interaction and make public space a place where one stops to look.

### **Modern maps**

A modern practice of Dérive is roaming the streets of your city through the satellite photographs in Google Maps and more recently Google Street View; a new feature of Google Maps that allows one to view and navigate high-resolution, 360 degree street level images of various cities in the US. Street View. Google's maps distinguish themselves from traditional printed maps in the sense that the user is able to interact. Besides zooming on location, the user is able to demand additional information with concern to a particular spot. This information is offered by parties collaborating with Google, as well as information from databases which Google has power over. Google Maps became vastly popular when it integrated satellite photographs (and photographs taken with airplanes) in its online maps; beside a map in conventional design containing information on demand, the map now presents a realistic bird eye view allowing the user to rediscover familiar places (such as his/her own house) from an unfamiliar perspective.

This idea of (re)discovering familiar places can be compared to taking a boat tour through ones own city. The roads beside the eight canals in the center of Amsterdam are passageways I personally frequently travel through; however, when passing through them by boat, the well-known monumental facades in the vicinity of the canals seemed foreign to me from a different angle. Similarly the satellite photographs in Google Maps changes meaning and memories attached to common places; it gives the user an experience of re-familiarity. Street View on the other hand draws on the recognizable

element; the photographs are taken from street level and thereby rediscovering is substituted for virtual sightseeing. The user can now wander through New York while staying at home; moreover, the user can zoom and alter the view at any time. Instead of looking up the fastest route or determining ones location, the function seems to have shifted in the direction of roaming and aimless wandering.

In addition modern maps are coupled to databases consisting of location bound information; possibly delivering the user knowledge and ultimately awareness. A wide variety of peer-created extensions are freely available augmenting the information and increasing the amount of knowledge, such as the Wikipedia extension – which provides a sense of temporal accuracy in Google Earth because information is provided about history and coming into being of a particular place, complete with specific dates, adding to the hyper-real situation. The practice of contributing to the medium opposes with traditional one-way media institutions. Google Earth allows users to act upon their creative skills and knowledge by offering possibilities to co-create the product and make it available to anyone, also outside the community. Google Maps API<sup>xcvi</sup> is a tool which users of Google Earth can use to include whichever information to existing maps offered by Google. In addition Google offers users SketchUp<sup>xcvii</sup>, similar to Google Maps API SketchUp is a free application with which users can add content to maps presented by Google, however with SketchUp the user can do this in 3D (for example a model of ones own house). Via Google 3D Warehouse<sup>xcviii</sup> the models can be uploaded and made available for all users of Google Earth. Currently maps are circulating in 3D or data tips containing personal information or photographs taken by users from a street level (which consequently changes the perspective of the original design)<sup>xcix</sup>. Information visualization tools such as maps enable greater understanding of reality, our society, life, and in short our existence. The accessibility and popularity of dynamic digital maps should make academics and interaction designers wonder how new ways of wandering can educate, emancipate, and enlighten the masses.

### **Modern play**

In March 2004 Blast Theory<sup>c</sup> premiered the world's first 3G mixed reality game, *I Like Frank* in Adelaide, Australia, at the Adelaide Fringe.<sup>ci</sup> People all around the world were able to play via the internet or on the streets in Adelaide using 3G phones. The goal of the game was to find Frank. People online had to make contact with someone playing the game on the streets, and give them directions as where to go. On the internet online players moved through a virtual model of the city, opening specific photo's of the city, which revealed hidden objects. These objects were then picked up by street players. Ultimately the collaboration of both people online and in the streets would solve the puzzle and locate Frank. Extending the game field to the 'real' world allows participants to look and interact in new ways with people and environment. Being in a different state of mind allows participants to discover new places in a space that it is familiar to them,

allowing them to break free from their daily routines. Due to media arts, the circulatory space of flows becomes again a space of places, since installation pieces that intervene in public spaces invite citizens to stop and perceive urban spaces in a different way. Therefore people no longer use urban spaces mostly to circulate and to go from place to place; rather, they start enjoying going to public places as their ultimate goal. One of *I like Frank's* participants underlines this statement; I didn't find Frank in any kind of embodied sense, but his trace encouraged me to be a tourist in my own city and to keep seeking out those individual and uncommon details that struggle for recognition within the everyday experience of public life.<sup>cii</sup>

In 2002, the Chaos Computer Club transformed an eight-story building in Alexanderplatz in Berlin into the world's biggest interactive computer display named *Blinkenlights*.<sup>ciii</sup> One hundred forty-four lamps were arranged behind the building's front windows, which were independently controlled to produce a monochrome matrix of 18 x 8 pixels.<sup>civ</sup> Users could "control the building's façade" either via their cell phones or Internet, creating animations, playing Pong, or sending love letters.<sup>cv</sup> In a way *Blinkenlights* shows us a marketplace hemmed in by an interactive screen, as if ready to be exposed. This image is very close to a drawing by Henry Moore, *Crowd Looking at a Tied-up Object* (1942). The drawing shows us a sculpture wrapped in cloth, as if ready to be unveiled. This was one of Moore's thoughts about the way to meet Picasso's challenge to represent nature without copying it, by wrapping a natural form so that it only hints at the contents of the package.<sup>cvi</sup> That idea has been the basis of Christo's long series of wrapped objects and veiled landscapes, which contemplate wonderingly, very much like the audience in Moore's drawing.



**Image 4.2** On the left a picture of *Tied-up Object* (Moore, 1942);  
On the right a picture of *Wrapped Trees* (Christo, 1998)

Christo and Jean-Claude are described as 'environmental artists' because they place their projects in the middle of everyday urban areas – a bridge (de Pont Neuf 1985), a building (*Wrapped Reichstag* 1995), a coast (*Surrounded Island* 1980), a valley (*Valley Curtain* 1970), Central Park (*The Gates* 2005) – and combine these with

elements of city planning, architecture, sculpture and engineering.<sup>cvi</sup> In the past forty years Christo and his wife Jeanne-Claude have realized 18 international art projects that have cost millions, accumulated millions, and drawn millions of people to the exposing cities.<sup>cvi</sup> 300, 000 people came to see (178) *Wrapped Trees* in the park of the Beyeler museum in Riehen, Switzerland.<sup>cix</sup> Which took 32 years to accomplish; it had to go through various governmental boards (from the prefect of police to the mayor), fundraising (done by Christo and Jeanne-Claude themselves by selling drawings and materials of older and future projects), putting a team of voluntary workers together, producing the materials, and finding a museum park. Its popularity is the primary reason why Micheal R. Bloomberg, mayor of New York, approved *The Gates* in Central Park.<sup>cx</sup>

Perhaps in the same sense the Chaos Computer Club and Blast Theory can be seen as 'environmental artists'. Conversely they also incorporate a virtual environment in real life space. With the use of 3G cell phones and the internet the artists are applying recent technological developments, that form an integrate part of contemporary urban space, to an aged artistic form/concept. What these projects have in common is the ability to transform circulation spaces, through which people pass by but no longer stop, into public places where people gather. The space is not used for transit only, but becomes a place where communication occurs and pleasurable experiences happen. Also the projects have a temporal character; after its exhibition (varying from a few months to a few years) the projects live on through photographs, drawings, websites and personal memories. In a way both Christo and locative artists are able to convert a region momentarily in a multi-user experience. Locative Media offer new possibilities for artists to experiment with urban space. It takes art from the galleries and the computer screen into the streets. It makes urban areas a place for people with similar interests to stop and meet. Locative Media artworks have a strong resemblance with environmental sculptures and environmental art in particular. The premise in this art form is that the city is a canvas; people walking through are an integral part of the object. Consequently as more and more people make use of mobile technologies connected to the internet, the city and its public – both users of mobile technologies and those that are not – become integrated in augmented space. Furthermore these projects demonstrate the level of organization required, contrasting notions of art being spontaneous or the contemporary spur-of-the-moment creed. Also, these practices are immensely expensive, accordingly it takes a large body of collaborating parties to fulfill the needs. As a result the media art scene, and with it the locative arts centre, is concentrated in metropolitan areas: Amsterdam, New York, London, Berlin. Making the art scene largely confined to the wealthy urban elite.<sup>cx</sup>

Artistic Locative Media practices, like hackers and tactical media discussed in the last chapter, are concerned with the possibility of the medium as well as how it is shaped by commercial interests. Locative Media projects can be interpreted as a way of commenting and influencing network protocol, city protocol, gazing protocol and social

protocol. Artists/designers are making consumers, the industry, and the government aware of the potential power Locative Media have to change the way in which we perceive and interact with the world around us. Artists make people aware, in the same way looking at Google Maps can possibly make one conscious how the accuracy of the images are utilizing locative technologies to usher in a new era of discreet and ubiquitous surveillance. The technology is slowly implanting itself in our daily life; activities seem more and more dependent on it. The medium enables databases with seemingly unlimited amounts of personal data to be recorded. Locative Media attests protocol has a hold on us, resisting is futile, for one will not be able to participate when rejecting the technology. Locative Media artists/designers are not discarding protocol, they are literarily sculpting it.

### **Breaking the frequencies**

The Internet, the city, and recently augmented space are flooded with disinformation, meaningless images, contrasting interpretations, unreliable sources and corporate spam. Public space is filled with images that consequently construct, direct and control our reality. Attempts to countervail, reform and improve should start at roots of our society; *our children*. Knowing how to acquire the appropriate information lays at the basis of survival. Society has changed in fundamental ways, the world's wealth has been drastically redistributed, and individuality and locality are drowning in a pool of homogeneity. Finding your way around is the essential; knowing how is the key.

In 2005 the Locative Media department of Waag Society developed a mobile learning game, in which "students are transported to the medieval Amsterdam of 1550 via a medium that's familiar to this age group: the mobile phone".<sup>cxii</sup> Frequency 1550 took place again in June 2007.<sup>cxiii</sup> The game uses 3G cell phones and network to allow students to compete in finding answers to questions about the old city of Amsterdam, for history class excursion and assignment. Frequency 1550 explores the social potential of location-aware devices, inspired by the use of tracking technology and wireless media, human relationships, movement and identity; the project seeks to extend and re-appropriate the functions of locative technologies by exploring ways in which they can be socially constructive and facilitate new dynamics to occur within everyday school life. Children are taught to look beyond city facades, interact socially and technically, and move through the city in new ways.

Frequency 1550 is an annotation of the current transition of social and traveling space, moreover, it is concerned with the medium and plays with its possibilities, ultimately shaping and advancing it. Frequency 1550 is, like Internet art, formed by commercial interests. Corporate minded sponsors, such as phone providers and cell phone producers, are constantly seeking how to control the market. Projects such Frequency 1550 are an ideal way of testing commercial applications and practices. Furthermore, introducing cell phones in the domain of education, as Frequency 1550

intends, offers a new market, one which is able to acquire governmental sponsoring as well as annex potential customers at an early age.<sup>cxiv</sup> Likewise, the city is used as testing ground for creative, commercial and governmental institutions to assess flaws and threats.

However, there are many problems regarding usability, expense, network stability and game design. Frequency 1550 is most certainly not the first Locative Media project that is constrained by the limitations of the available technology. Central in the game play is the challenge of roaming the environment while deciphering the presented information on a miniature screen and interacting with the device through a badly designed cell phone keyboard (in ten years it probably will be considered ridiculous to use your thumb to text messages on a 10 button keyboard). Furthermore, at this commencing stage the mobile network, the Bluetooth and GPS connection, and communication to a central server are simply not advanced enough to separate the world and the presented scenario. These barriers make it almost impossible to engage with the plot and temporarily escape from reality. Frequency 1550 does not go beyond positioning; engagement is limited to location, not its context. Of course the project is not only about concentrating context in a coordinate point, nor is the project merely about gaining greater understanding of place through the cell phone screen. Frequency 1550 is not a museum or digital touring guide; the focus is on opening up spaces of play through in which context *may* be discovered.

Frequency 1550 is protological in many ways; besides the technical protocols enabling communication and information visualization, the users are presented a scenario that directs and narrates the city. The project differs from an ordinary excursion or contemporary artistic practices because the users are voluntarily engaged in the situation whilst following a set of rules. These rules instruct historical facts, social interaction, coordination and navigation. The children are stimulated to actively participate in the 'lesson' – and this is generally different in a disciplinary form of education. Currently the University of Utrecht and the University of Amsterdam are collaborating with Waag Society to research the learning effects of learning games.<sup>cxv</sup> Furthermore Frequency 1550 aptly demonstrates the dominant presence of the control society. Disciplinary institutions, such as schools, are crumbling down and turned over to a more pervasive form of training that uses both the privacy intrusive technology and also the corporate means.

IN CONCLUSION, Locative Media is another distraction; a product of a society 'living on' experience and sensation. The intensifying augmentation of space, facilitated by wireless portable devices that are in continuous contact with the Internet, creates an augmented space where boundaries between virtual and actual diminish. However public space is increasingly a result of consumers annotating, narrating and mapping urban territory, contributing to the city's spectacle, adding and giving new meaning to familiar places. Yet, the participatory process of hybridizing the city also makes connotation, veracity and trust assigned to places unreliable, as it is a mix of subjective and sometimes contrasting perspectives. Furthermore, Locative Media assists a shift in power and control, both from a grass-root and a repressive level; Locative Media allows public participating, mobilizing and initiating action, on the other hand the technology gives way to new forms of corporate and governmental control. Essentially locative media allows us to look beyond the façade..... and into your room.

Because the technology is still relatively new, it is difficult to assess in what way the problems Locative Media projects faces, concerning engagement and creating contextual awareness beyond place, can be solved. In addition, the network, the practices and the organization are too expensive to be appealing to people or places in immediate need. One way to overcome some of the barriers is to open up the network and allow for Creative Common licensing and Mobile Web 2.0 contributions. The direction should focus on materializing an open society in which less centralized planning is required because most things can be solved locally. Mobile technologies assists participatory and collective action, this can exploit new forms of engaged citizenship and ad-hoc organization at local level. Locative Media artists can push the technology further, and formulate new ways for local self-organizing communities to counter homogeneity.

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Minority Report (USA: Spielberg, 2002)  
Roger & Me (USA: Moore, 1989)

## WEBSITE LIST

**Bert is Evil Website** [www.spacecat.com/bert/](http://www.spacecat.com/bert/)

“We have reason to believe that Bert of Sesame Street is evil and you should keep your children away from him. Here in these pages are collected incriminating images and documents that prove that Bert is not the lovable harmless geek he so successfully makes us think he is.”

**CNN Website** <http://archives.cnn.com/2001/US/10/11/muppets.binladen/>

News site by broadcaster CNN containing the article: 'Muppet' producers miffed over Bert-bin Laden image, October 11, 2001. Posted: 2:16 PM EDT (1816 GMT)

**Wikipedia Happenings** <http://en.wikipedia.org/wiki/Happenings>

Online encyclopedia Wikipedia entry concerning Happenings.

**GoogleMaps API** <http://www.google.com/apis/maps>

Site from Google containing Maps API “a free beta service, available for any web site that is free to consumers.”

**SketchUp** <http://sketchup.google.com>

Google site containing information regarding Sketch Up a tool to design houses in Google Earth.

**Google 3D Warehouse** <http://sketchup.google.com/3dwarehouse>

Google site containing tools to use for designing houses in Google Earth.

**Blast Theory** [http://www.blasttheory.co.uk/bt/work\\_ilikefrank.html](http://www.blasttheory.co.uk/bt/work_ilikefrank.html)

Official site of Blast Theory a locative media group composed of several London-based avant-garde theatre artists. They have gained renown for projects such as Can You See Me Now (2001), Uncle Roy All Around You (2003), and I Like Frank (2004), in which they used location-aware mobile mapping devices to coordinate interactions of audience and performers in both real and virtual space.

**Blinkenlights** <http://www.blinkenlights.de/>

Official Blinkenlights website containing tools, information and images of the project.

**Frequency 1550 at Waag Society website** <http://freq1550.waag.org/>

Website of Waag Society containing background information regarding Frequency 1550

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**Christo and Jeanne-Claude** <http://christojeanneclaude.net/index.html.en>

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- <sup>xviii</sup> idem
- <sup>xix</sup> idem
- <sup>xx</sup> idem
- <sup>xxi</sup> This is evident in the case of a Dutch based company that produces and sells television commercial formats that do not feature the name of the product or the actual product itself; the commercials are universal casts applicable to any item and therefore able to be sold to multiple parties. Shown on *De wereld draait door* (VARA) 2007.
- <sup>xxii</sup> Goggin, G. *Cell phone cultures*. London and New York: Routledge, 2006. pg. 203
- <sup>xxiii</sup> idem
- <sup>xxiv</sup> The biometric industry is vastly expanding its market. The International Biometric Group estimates that in 2010 the global market for biometrics has an extent of \$ 5.7 billion. Ministerie Economische Zaken: <http://www.twanetwerk.nl/default.ashx?DocumentID=8045> Last visited 31-08-2007
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- <sup>xxviii</sup> Deleuze and Guattari, 1987: pg. 12
- <sup>xxix</sup> Deleuze and Guattari, 1987: pg. 21
- <sup>xxx</sup> Foucault, M. *Discipline and Punish*. Tr. A. Sheridan. New York: Vintage, 1997. pg.197
- <sup>xxxi</sup> Galloway, 2004: pg. 31
- <sup>xxxii</sup> idem
- <sup>xxxiii</sup> Hardt, M. and Negri, A. *Empire*. Cambridge: Harvard University Press, 2000.
- <sup>xxxiv</sup> Negri & Hardt, 2000: pg. 23
- <sup>xxxv</sup> Galloway, 2004: pg. 26
- <sup>xxxvi</sup> Negri & Hardt, 2000: pg. 199
- <sup>xxxvii</sup> Galloway, 2004: pg. 26

- xxxviii Galloway, 2004: pg. 111
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- xlii Negri & Hardt, 2000: pg. 294
- xliiii Negri & Hardt, 2000: pg. 295
- xliv Sassen, S. *The Global City*. 2<sup>nd</sup> edition. Princeton: University Press, 2001.
- xlv idem
- xlvi Negri & Hardt, 2000: pg. 295
- xlvii Negri & Hardt, 2000: pg. 296
- xlviii Roger & Me (USA: Moore, 1989)
- xlix At the climax scene Moore calls Smith via telephone, the conversation is recorded;
- Moore: Mr. Smith, we came from Flint, where we filmed a family being evicted from their home the day before Christmas Eve. A family that worked in your factory. Would you be willing to come with us to see the situation in Flint? Smith: I've been to Flint, and I'm sorry for them, but I don't know anything about it.
- Moore: Families being evicted on Christmas Eve are not able to live their lives...
- Smith: General Motors didn't evict them. Talk to the landlord...
- Moore: They used to work for GM. Now they don't work there anymore.
- Smith: I'm sorry, but...
- Moore: Could you come to Flint?
- Smith: No, I cannot. I'm sorry.
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- lii idem
- liii idem
- liv Saskia Sassen discusses this point in *Public Interventions* 2006. <http://www.skor.nl/article-2888-en.html>  
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- lv Klein, 2001.
- lvi Klein, 2001: pg. 229
- lvii Klein, 2001: pg. 98
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- lix Klein, 2001: pg.
- lx De Certeau, M. *The Practice of Everyday Life*. Tr. S. Rendall. Berkeley: University of California Press. 1984. (original in French 1974)
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- lxiii Lovink, G. *Dark Fiber: Tracking Critical Internet Culture*. Cambridge: The MIT Press, p.258.
- lxiv Klein, 2001: pg. 317
- lxv idem
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- lxix idem
- lxx Plant, S. *The Most Radical Gesture: The Situationist International in a Postmodern Age*. New York: Routledge, 1992.
- lxxi Klein, 2001: pg. 119
- lxxii Klein, 2001: pg. 126
- lxxiii Klein, 2001: pg. 133
- lxxiv See cover
- lxxv Debord, 1967: theses # 166

- <sup>lxxvi</sup> Debord, 1967: theses # 167
- <sup>lxxvii</sup> Debord, 1967: theses # 169
- <sup>lxxviii</sup> Debord, 1967: theses # 170
- <sup>lxxix</sup> Debord, 1967: theses # 173
- <sup>lxxx</sup> Medosch, A. "Society in ad-hoc mode". *Economising Culture: on the (digital) cultural industry*. Eds. Cox et al. Plymouth and New York: Autonomedia, 2004. Available online from: <http://www.ejhae.elia-artschools.org/Issue2/2a-medosch.htm> Last visited 31-08-2007.
- <sup>lxxxii</sup> Medosch, 2004.
- <sup>lxxxiii</sup> In a similar search of new modes of cultural production The Institute for Applied Autonomy and The Bureau for Inverse Technology both infiltrate and critique the culture of engineering from the inside.
- <sup>lxxxiv</sup> For more about counter-globalization see: Sassen, S. *Public Interventions*. 2006 available online: <http://www.skor.nl/article-2888-en.html> Last visited 31-08-2007
- <sup>lxxxv</sup> Rheingold, H. *Smartmob*. Cambridge, MA: Basic Books, 2002. pg. 20
- <sup>lxxxvi</sup> idem
- <sup>lxxxvii</sup> Castells 2004 206-211 as cited from Barendregt 2006 pg. 328
- <sup>lxxxviii</sup> Kompas 21-5-2004 as cited from Barendregt 2006 pg. 328
- <sup>lxxxix</sup> Barendregt. "Mobile modernity". *Indonesian Transitions*. Ed. Schulte Nordholt, H. Yogyakarta: Pustaka Pelajar, 2006 pg. 332
- <sup>xc</sup> Barendregt, 2006: pg. 333
- <sup>xc</sup> Malpas, S. *The Postmodern*, Routledge, 2005. p17.
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- <sup>xcii</sup> McEvilly, T. in Roth, Dubuffet, King, *Beauty Is Nowhere: Ethical Issues in Art and Design*, Routledge, 1998. p27.
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- <sup>xciv</sup> Baudrillard, 1994
- <sup>xcv</sup> De Souza e Silva. *From Cyber to Hybrid: Relocating our Imaginary Spaces through Mobile Interfaces*. Federal University of Rio de Janeiro, Brazil: 2004.
- <sup>xcvi</sup> GoogleMaps API: <http://www.google.com/apis/maps> Last visited 31-08-2007
- <sup>xcvii</sup> SketchUp: <http://sketchup.google.com> Last visited 31-08-2007
- <sup>xcviii</sup> Google 3D Warehouse: <http://sketchup.google.com/3dwarehouse> Last visited 31-08-2007
- <sup>xcix</sup> This concerns photographs uploaded by peer users. *Google Street View* also makes use of photographs taken from street level, however, the user is able to interact – by means of zooming and changing the angle.
- <sup>c</sup> Blast Theory is a locative media group composed of several London-based avant-garde theatre artists. They have gained renown for projects such as *Can You See Me Now* (2001), *Uncle Roy All Around You* (2003), and *I Like Frank* (2004), in which they used location-aware mobile mapping devices to coordinate interactions of audience and performers in both real and virtual space.
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- <sup>cviii</sup> They have failed 22 times to realize a project. Source: Christo and Jeanne-Claude. <http://christojeanneclaude.net/index.html.en> Last visited 28-12-2006
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- <sup>cxii</sup> Frequency 1550 at Waag Society website: <http://freq1550.waag.org/> Last visited 31-08-2007
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<sup>cxiv</sup> In 2005 KPN sponsored Frequency 1550 in order to test the UMTS network. There are no cell-phone manufacturers collaborating with the project.

<sup>cxv</sup> Research concerning the learning effects are (soon) published on [www.frequentie1550.nl](http://www.frequentie1550.nl) Last visited 31-08-2007