The Network of Waves
Living and Acting in a Hybrid Space

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The emergence of digital media has meant that in recent years the use and significance of traditional public space has altered radically. The newest developments in information technology make use of apparatus which is less and less noticeable, so making a critical attitude more difficult. Eric Kluitenberg, researcher in the field of the significance of new technologies for society and guest editor of the present issue, draws attention to a number of activist strategies to encourage public and private action in a hybrid space.

The office space above which I live, in a corner house in the Indische Buurt, somewhere in Amsterdam East, used to house a local police station. At that time I was not yet living there. The place was briefly in the national news because of a fair-sized riot which took place there. A couple of Moroccan youths were brought to the station for some minor offence. Their friends thought that this was not right, so they followed the police back to the station to besiege the policemen there. It was not just a few friends who ran after the policemen, but a much larger group which suddenly turned up at the station, coming from nowhere at the precise moment that the youths were brought in. At that time this phenomenon, later known as a 'flash mob', [1] was still relatively new. The police on site were unpleasantly surprised, and had to issue a hasty call for reinforcements to negotiate with the besiegers. When it was all over a police spokesman said that it was a disgrace that the Moroccan youths had used their mobile phones to mobilize a mob. How else could these youths all have known at the same time that something was going on at which their physical presence was 'urgently desired'? And exactly where they needed to be? What the spokesman meant was that the youths had compiled mailing lists for text messages and then used texting to get together as many people as possible as quickly as possible. Texting with mailing lists was a popular application, because at that time text messages could still be sent and received free of charge.

A few years ago 'flash mobs' received a good deal of attention from the mass media. Semi-spontaneous public gatherings of groups of people, hardly if at all known to one another, nondescript, with no determining characteristics such as banners, uniform or logo, briefly performed some collective synchronous action, and then dissolved back into 'the general public'. Directions and information about the gathering were sent out by text messages, or e-mails, telling participants where, when and what. These short messages could easily be sent on to friends and acquaintances with the aim of starting a chain reaction resulting in the appearance of an unpredictably large mob at a predetermined time and place.

Reclaim the Mall!!

The 'flash-mob' phenomenon is thought by some people to have originated in a few relatively unmanageable actions in large shopping centres in American towns, disorganizing them temporarily and playfully. These actions generally had no political significance. This all changed at the end of the 1990s. The 'Reclaim the Streets' movement, [2]

highly active at the time, which used to organize illegally orchestrated 'street raves' inthe public spaces of large towns, made intensive use of text and e-mail address lists to organize quasi-spontaneous street parties. They did however give these street parties a layered political agenda. The parties were generally given concrete political and social themes and were linked to particular actions, such as support for a strike by London Underground staff. The movement's desire to also use these actions to free public space from its economically determined function (for instance transport, shopping or advertising) was succinctly expressed in the slogan 'The streets for people!'. The parties followed a fixed procedure. The evening before, a sound truck with a generator, a DJ kit and a large number of loudspeakers would park in a wide street. Shortly before the start a double collision would be staged at the beginning and end of the street. The crucial factor here was the provision of information for the participants, who were, in principle, unknown to the organizers. Participants therefore received a short message containing simple directions to the place, the date, the time and a few instructions, such as 'wait for the orange smoke – that's when the rave will begin'. The double collision meant that at the agreed time the street was closed to all traffic. The cars used were fitted with smoke bombs which were set off by the mini-crash, producing enormous plumes of orange smoke, visible for miles around. This was the sign for which the 'Reclaim the Street' mob was waiting. Suddenly the street was flooded with people, sometimes more than a thousand at a time, while music began to boom from the previously parked truck or bus.

These examples demonstrate that we are living in a space in which the public is reconfigured by a multitude of media and communication networks interwoven into the social and political functions of space to form a 'hybrid space'. Traditional space is being overlaid by electronic networks such as those for mobile telephones and other wireless media. This superimposition creates a highly unstable system, uneven and constantly changing. The social phenomena which occur in this new type of space can not be properly understood without a very precise analysis of the structure of that space.

The way the Moroccan youths in Amsterdam East used text message address lists to mobilize themselves rapidly and effectively against what they saw as unjustified police violence provides an interesting example of a social group which finds itself in a socially segregated and stigmatized position appropriating a newly available technology. Mobilization was possible because at that time real-time mobile communication (texting) was available essentially free of charge. Shortly after that incident, texting became a paid service, though the reasons for this were economic rather than political, and its use for this purpose quickly lost popularity. It was simply too expensive to send so many messages at the same time. The specific relationship between time, space and technology, and to a lesser extent simple economics, determined the way in which this social phenomenon manifested itself. More than e-mails, which almost always have to be downloaded from a terminal or laptop (e-mailing on a mobile telephone is extremely laborious and inefficient), the brief phase during which text messaging served as a free public medium provided an important indicator to a changing relationship in the use and organization of public space. The mobility and immediacy of the medium gave birth to new social morphologies, like the 'flash mob', which still seem mostly to indicate a kind of mobile 'just-in-time-community' in physical public space.

Places and Flows

The question here is what this new kind of social morphology might mean. What lies behind the gimmick? What social, economic and technological transformations give rise to new phenomena of this kind?

So far the most important sociological theory about this is set out in Manuel Castells' *Rise of the Network Society*, the first part of his trilogy on the information age.[3] In it he describes the rise of flexible social network connections which resulted from economic

and social transformations in late industrial societies and were strengthened by the introduction and wide application of new technology, primarily communication and information technology. Castells postulates that the network has become the dominant form in a new type of society that he calls the network society. He treats the influence of the network form as a social organization in physical and social space and establishes a new kind of dichotomy. According to Castells there are two opposing types of spatial logic, the logic of material places and locations (space of place) and the logic of intangible flows of information, communication, services and capital (space of flows).[4]

The particularly striking thing about Castells' theory is the strict separation between the two kinds of spatial logic. Whereas the space of places and locations is clearly localized and associated with local history, tradition and memory, Castells sees the space of flows as essentially ahistorical, location-free and continuous. This last mainly because it moves across every time zone and so in some sense is not only location-free but also timeless.[5] Castells believes there is a fundamental asymmetry between the two kinds of space: while the vast majority of the world's inhabitants live, dwell and work in the space of places and locations, the dominant economic political, social and ultimately also cultural functions are increasingly shifting to the place of flows, where they make possible location-free ahistorical network connections, international trends, power complexes and capital movements. Only a very small part of the world population is represented in the bodies which take decisions about the organization and use of new location-free spatial connections. But increasingly the decisions made within such self-contained systems determine the living conditions in those places and locations where the vast majority of the world population attempt to survive and where their knowledge, experience and memory is localized. Castells feels that it is not surprising that political, social and cultural bridges need to be deliberately built between the two spatial dynamics, to avoid society's collapse into insoluble schizophrenia.

The attractive thing about Castells' theory is that it makes it possible to grasp and clarify a multiplicity of asymmetric social developments in a single image – an image that has certainly not left popular culture unmoved. At the same time Castells' suggested contrast between physical locations and places and the intangible space of flows is misleading and ultimately even counterproductive for his political agenda: the deliberate building of bridges between physical space and informational space. Instead of a strict separation between physical space and informational space, all technological and social trends clearly indicate that these two 'spheres' are becoming more and more closely interwoven. A generic model of the sort suggested by Castells is totally unsuited to the analysis of this closeness and to gaining an understanding of how possibilities for public and private action come about within it, the central question posed in the present issue of *Open*. What threats to the autonomy and inviolability of the subject, the group, the community or cultural self-determination could possibly manifest themselves here and how can something be done about those threats?

Hybrid Space as a Multiform Concept

Against the placelessness and continuity of Castells' ahistorical 'space of flows' stands the discontinuity and multiplicity of hybrid space. The hybridity of this spatial concept refers not only to the stratified nature of physical space and the electronic communication networks it contains, but every bit as much to the discontinuity of the 'connectivity' or degree of connection between the multiplicity of communication networks. After all, even the universal presence of a telephone connection can not be taken for granted. More important still is the connection between local social and electronic networks: who communicates with whom, and in what context, is determined differently from one region to another, sometimes even from one day to the next. Because the space of electronic communication is rooted in local networks, it is also linked with local history. And questions about who controls electronic space or becomes familiar with electronic space are by no means easy to answer. Ravi Sundaram for example, co-founder of the Sarai new media initiative in Delhi, is constantly drawing attention to the coming into being of what he calls 'electronic pirate-modernity', [6] which comes about when local groups or individuals, illegitimately and without permission, gain access to television, telephone or the Internet – 'Never ask permission, just appear!'.

Hybrid space is never exclusively local, as in the case of the idyllic hippy commune at the beginning of the 1970s. Small local networks, hacked or not, never remain limited to the local bazaar or the vegetable market in the next village. Local networks interweave with the international networks into which they force their way. Thus, says Saskia Sassen, the local is newly established as a micro-environment with a worldwide reach. Free-software geniuses in Sao Paulo's *favelas* find no difficulty in downloading the results of the latest interchange between the Amsterdam Waag (the Society for Old and New Media) and the Alternative Law Forum in Bangalore, but nobody pulls his or her local roots out of the ground.

Diktat of Visibility

The thing that strikes one about current discussion and the associated criticism of the rise of electronic media in public space is the preoccupation with the visual forms in which these media manifest themselves, such as screens, projections and electronic tagging. [7] It is a sort of extended visual criticism, closely connected with a tradition which assumes that the visual arrangement of observable reality is a necessary precondition for any ability to exercise power over that reality. However, the thing that stands in the way of this preoccupation with the visual is a critical analysis of the more invisible processes which are rearranging public space and imposing a different utilization logic. Relatively invisible forms of social compulsion, which bring these processes into play, may well have a much greater significance for the way in which public space can and may be used in future.

The concept of the perfect visual arrangement, expressing a social reality in which power structures are completely unambiguous and transparent, still always refers to Alberti's 'legitimate construction' and Piero della Francesca's ideal city, both of which reflect a visual articulation of daily life suggesting that everything, social and public, is completely controllable and constructible. Although the unifying point of view of a linear perspective has long been rejected, the street screens still stipulate for us a single perspective: a correct viewing distance and direction, while social relationships are radically altered.

The street screen is also the embodiment of spectacle in its most repressive form. Today spectacle is no longer alone in controlling the inner life, the interior of the alienation of the average TV junkie. The street, the classic stage of modern theatre, is overloaded with marching electronic screens and projections, so erasing the public functions 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.

Limitation of the Screen

Another point of criticism of the new urban visuality is its inherent limitation. Virtually every screen is rectangular and flat and has limited resolution (the number of pixels which determine the quality of the image). Media artists recognized these limitations years ago and have, with varying degrees of success, developed a multitude of strategies to attempt to overcome those limitations by, for example, a spatial type of installation, interactive media in which the screen itself also becomes an object capable of being moved and manipulated, projection on walls, fabrics, curved screens, screens that are not rectangular, [8] mirrored projections, moving projections, projections on glass materials and so on. Some artists, as for example the members of the Knowbotic Research collective, even leave out screens entirely, replacing them by new haptic interfaces and stereoscopic helmets from the Virtual Reality research laboratory or, as during the 1996 Dutch Electronic Art Festival, an installation on the roof of the Netherlands Architecture Institute, where network manipulations translated into sound and stroboscopic light. [9] Yet another example of the movement to bypass the screen is the Xchange network, in which artists collectively explore the sonic dimension of the Internet. [10]

The new generation of media-architects can learn from media art that the screen is ultimately a dead end. It is interesting to see how these attempts at iconographic liberation keep on recurring. Avant-garde painters carried out endless experiments in their attempts to break away from the frame of the painting and the surface of the canvas, their ultimate aim being to announce the death of the 'retinal' object. This same death announcement is repeated by today's media artists, but this time in relation to the screen. Media architecture again venerates the screen as a window on a space first seen as boundless, but later recognized as being largely subject to limitations and conventions.

Ultimately the screen dissolves into the architecture, becoming less a screen than a membrane between physical and medial reality. Here the 'image' functions less and less as an autonomous object, but increasingly coincides with the architecture itself, its skin, its inner life and its internal processes, finally disappearing from the consciousness of the user of that architecture. The image becomes subliminal, 'vernacular', commonplace, merged with the environment, self-evident – in the end the spectacle neutralizes itself. Media theorist Lev Manovich was still positive about this new medially enhanced architecture in his essay entitled *The Poetics of Augmented Space*, that had *Learning from Prada* as subtitle and was based on the success of Koolhaas's creation. [11] By now we know that the concept has failed completely, screens have disappeared from the scene or have been cut back to a minimum. The lesson of Prada is that the strategy of visibility can quickly turn into its opposite.

The Problem of Invisibility

In the present phase, the most important change in computer technology and its applications is that they are steadily beginning to withdraw themselves from sight. The European Union has for some years now been subsidizing a wide-ranging programme of multidisciplinary research and discussion with the remarkable title *The Disappearing Computer*. This title alludes less to the disappearance of computer technology than to its ongoing miniaturization and the way that it is beginning to turn up everywhere. The programme is investigating the migration of electronic network technology into every kind of object, to built environments and even to living beings. The thesis is that miniaturization and steadily reducing production costs are making it simpler to provide all kinds of objects with simple electronic functions (chips containing information, tags that can send or receive signals, identification chips and specialized functions in everyday objects). This is more efficient than building ever more complex pieces of multifunctional apparatus and mean the abandonment of the old idea of the computer as a universal machine capable of performing every conceivable function. [12] In fact, this is how technology becomes invisible. A decisive step, with dramatic consequences for the way people think about and deal with spatial processes. This rise of computer technology in the environment introduces a new issue: the problem of invisibility. When technology becomes invisible, it disappears from people's awareness. The environment is no longer perceived as a technological construct, making it difficult to discuss the effects of technology.

Lev Manovich speaks of 'augmented space', a space enriched with technology, which only becomes activated when a specific function is required. [13] Wireless transmitters and receivers play a crucial role in such enriched spaces. Objects are directly linked with portable media. Chips are incorporated into identity cards and clothing. Even one's shopping is automatically registered by sensors. Screens and information systems are switched on remotely, by a simple wave of the hand. Miniaturization, remote control and particularly the mass production of radio frequency identification (RFID) tags is bringing the age-old technological fantasy of a quasi-intelligent, responsive environment within reach of digital engineers.

Of course these applications are not exclusively neutral. Combinations of technologies of the sort described above make it amazingly simple to introduce new and infinitely differentiated regimes for the control of public and private space. The application to public transport of rfid smart cards, which automatically determine the distance travelled, the fare and the credit balance, still sounds relatively harmless. Fitting household pets with an identity chip the size of a grain of rice, inserted under the skin, has become widespread practice. Indeed most health insurance schemes for household pets prescribe the insertion of such chips as an entry condition. Recently, however, first reports have turned up of security firms in the United States which provide their employees with subcutaneous chips allowing them to move through secure buildings without the use of keys or smart cards. Such systems also allow companies to compile a specific profile for each individual employee specifying those parts of the building or object to which the employer has (or is denied) access, and at what times.

It is not difficult to extrapolate these practices to society as a whole. Who has the initiative in such matters? If the initiative lies exclusively with the constructors, the producers of these enriched spaces, and their clients, then the space we are living in is liable to total authoritarian control, even if there is no immediately observable way in which that space displays the historic characteristics of authoritarianism. The more widely the initiative is distributed between producers and consumers and the more decisions that are made at the 'nodes' (the extremities of the network, occupied by the users) instead of at the 'hubs' (junctions in the network), the more chance there is of a space in which the sovereign subject is able to shape his or her own autonomy. The articulation of subjectivity in the network of waves is also an opportunity for the last remnants of autonomy to manifest

themselves.

The Strategic Issue: 'Agency' in Hybrid Spaces

The concept of 'agency' is difficult to interpret, but literally combines action, mediation and power. It is not surprising therefore, to find it applied as a strategic instrument for dealing with questions about the ongoing hybridization of public and private space. Unlike Michel de Certeau's tactical acts of spatial resistance to the dominant utilitarian logic of urban space in particular, the action of this instrument in new ('augmented') hybrid spaces has mainly strategic significance. A tactical act of spatial resistance, which is after all no more than temporary, is hardly comforting to anyone faced by such an infinitely diversified and adaptive system of spatial control. New hybrid spaces must be deliberately 'designed' to create free spaces within which the subject can withdraw himself, temporarily, from spatial determination. Given the power politics and the enormous strategic and economic interests involved, and the associated demands for security and control, it is clear that these free spaces will not come about by themselves or as a matter of course. I would therefore like to suggest a number of strategies to give some chance of success to the creation of these spaces.

Public visibility: 'maps and counter-maps', tactical cartography

The problem of the invisibility of the countless networks penetrating public and private space is ultimately insoluble. What can be done, however, is to remake them in a local and visible form, in such a way that they remain in the public eye and in the public consciousness. This strategy can be expressed in 'tactical cartography', using the tools of the network of waves (gps, Wi-Fi, 3G, etcetera) to lay bare its authoritarian structure. An aesthetic interpretation of these structures increases the sensitivity of the observer to the 'invisible' presence of these networks.

Disconnectivity

Emphasis is always placed on the right and desire to be connected. However, in future it may be more important to have the right and power to be shut out, to have the option, for a longer or shorter time, to be disconnected from the network of waves.

Sabotage

Deliberately undermining the system, damaging the infrastructure, disruption and sabotage are always available as ways of giving resistance concrete form. Such measures will, however, always provoke countermeasures, so that ultimately the authoritarian structure of a dystopian hybrid space is more likely to be strengthened and perpetuated than to be thrown open to any form of autonomy.

Legal provisions, prohibitions

In the post-ideological stage of Western society it seems that the laws and rights used to legalize matters provide the only credible source of social justification. But because a system of legal rules runs counter to the sovereignty of the subject it can never be the embodiment of a desire for autonomy. It can, however, play a part in creating more favourable conditions.

Reduction in economic scaleNew systems of spatial planning depend on continuing increases in economic scale. To apply these systems to all market segments would require the production of an enormous number of instruments. Thus the political choice to deliberately reduce economic scale would be an outstanding instrument to thwart this 'scaling-up' strategy. [14]

Accountability and public transparency

In the words of surveillance specialist David Lyon, 'Forget privacy, focus on accountability'. It would be naive to assume that the tendencies described above can easily be reversed, even with political will and support from public opinion. A strategy of insisting on the accountability of constructors and clients of these new systems of spatial and social control could lead to usable results in the shorter term.

Deliberate violation of an imposed spatial programmeCivil disobedience is another effective strategy, especially if it can be orchestrated on a massive scale. Unlike sabotage, the aim here is not to disorganize or damage systems of control, but simply to make them ineffective by massively ignoring them. After all, the public interest is the interest of everyone, and no other interest weighs more heavily. [15]

The creation of new social and political players – public action

Agency', the power to act, means taking action in some concrete form. The complexity of the new hybrid spatial and technological regimes makes it appear that the idea of action is in fact an absurdity. However, new social and political players manifest themselves in public space by the special way they act, by clustering, by displaying recognizable visuality, by evoking an individual 'presence' (in the Anglo-Saxon anthropological sense) in opposition to others. The manifestation of concrete action by new social and political players in public space is a 'gesture'. The action, in this case, is the way the space is used, though there is still a difference between the use of a space and more or less public actions in that space. The use of space becomes an action when that use takes on a strategic form.

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Footnotes

1. For a description, see en.wikipedia.org.
2. Reclaim the streets website rts.gn.apc.org.
3. Manuel Castells, *The Rise of the Network Society (Oxford: Blackwell Publishers, 1996).*
4. Ibid.

5. Consider for example the concept of the 24-hour economy.
6. 'Electronic pirate modernity': see also www.sarai.net.
7. See also www.urbanscreens.org or the Logo Parc symposium held in Amsterdam on 16 November 2005, a cooperative project undertaken by the Jan van Eyck Academy, the Premsela Foundation and the Art and Public Space Lectureship (Rietveld Academy and the University of Amsterdam).
8. These 'shaped screens' do incidentally form a curious counterpart to Frank Stella's *Shaped Canvasses.*
9. Anonymous Muttering: www.khm.de.
10. Website of the Xchange network, xchange.re-lab.net.
11. Lev Manovich*, The Poetics of Augmented Space: Learning from Prada* (2002), see www.manovich.net
12. The so-called Turing Machine, named after the mathematician Allan Turing – the machine that is capable of simulating any other machine.
13. Manovich, *The Poetics of Augmented Space*, op. cit. (note 11).
14. The mass production of rfid (radio frequency identification) tags compelled producers to minimize the security provisions incorporated to allow the tags to be applied cost effectively to virtually any conceivable consumer product. A policy of giving priority to the safety and reliability of the chips and the information stored on them would make them much too expensive, restricting their development to specialized 'niche' markets.
15. Examples of a new kind of civil disobedience include deactivating rfid tags with the aid of an adapted mobile phone, hindering the operation of smart cards, regularly swapping client cards, deliberately supplying false information when registering online and using 'anonymizers' on the Internet, 'encrypted' (coded) mobile phones and local GSM blockers.

Tags

Media Society, Public Domain, Public Space, Urban Space