Interactive Digital Narratives:
Bringing Meaningful Interaction Into Public Spaces

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Declaration

I declare that the work described in this research paper is, except where otherwise stated, entirely my own work and has not been submitted as an exercise for a degree at this or any other university.

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Abstract

"What we have created [...] is an impersonal theatre of human interactions, and a paradox of isolation in the midst of visual transparency"

Sennett, R. (1986) The fall of public man

This dissertation analyses the potential of digital interactive narratives in bringing back meaningful interaction to public spaces. In the context of this research, a definition of meaningful interaction is given and used as a reference to analyse the decline of public spaces in modern society. In parallel to the movement away from meaningful interaction in public spaces, the rise of mass media and eventually the Internet are shown to have increasingly collapsed the distance between people, creating what Marshall Mc Luhan called a 'global village.' An analysis of the virtual communities emerging from the rise of this networking society are shown to be reflective of modernist urban planning in being fragmented, privatized and lacking any true sense of equality. Procedurally generated interactive digital narratives are shown to be similarly closed and limited. To oppose this, Umberto Eco's concept of 'open work,' and Ranciére's 'emancipated spectator' are examined and shown to provide the possibility of providing emergent social interactions through a narrative with an open structure. Pervasive games are highlighted as a means of bringing such experiences as Eco's 'open work' out into the public space. Finally, Blast Theory's 'A Machine To See With' is examined using the principles embodied in Umberto Eco's 'open work,' James Bohman's prerequisites for meaningful discourse, and Ranciére's 'emancipated spectator.' This revealed how such narratives set in a public space, even with a relatively rigid narrative structure, have the possibility to generate engagement of strangers through playacting and disruption of the everyday experience in public spaces.

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Introduction

This dissertation seeks to examine the possibility of digital interactive narratives in bringing meaningful interaction back into public spaces. The first chapter provides a definition for the meaningful interaction in the context of this dissertation and is used as a reference with which to compare and analyse the decline of public spaces in contemporary society. The analysis of public space examines the influence of modernist urban planning principles and their tendency towards a homogenisation of space as a result of what Sennett terms an 'over-determination.' The resulting segregation is shown to be a contributing factor towards the retreat from the public realm and the rise of the individual. The second half of this chapter examines how technology, namely mass media, intensified this process through an over abundance of information which led to the need for an individual production of meaning.

The second chapter analyses the possibilities of meaningful interaction through digital interactive media. The Internet is shown to have collapsed the distance between each of us, yet, conversely, the increased interactivity afforded by the Internet is accompanied by a lack of openness. This is examined in the analysis of virtual communities using principles extracted from Bohman's *"Expanding dialogue: The Internet, the public sphere and prospects for transnational democracy."* Such communities are shown to be as segregated and closed as the results of modernist urban planning in the physical world. The latter half of this chapter examines the limits of procedural generated interaction and examines the possibilities presented to us by Umberto Eco's concept of 'open work,' Ranciére's 'emancipated spectator' and thus, the importance of theatre and human-centred interaction in digital interactive narratives. An examination of pervasive games is show to provide the possibility of bringing meaningful interactions back into public streets. Finally using Steve Dixon's 'levels of Interactivity,' a framework is established to analyse the level of interactivity necessary to provide such an 'open' work.

The third chapter chapter examines Blast Theory's 'A Machine To See With' using the principles embodied in Umberto Eco's 'open work,' James Bohman's prerequisites for meaningful discourse, and Ranciére's 'emancipated spectator.' This revealed how such narratives set in a public space, even with a relatively rigid narrative structure, have the possibility to generate emergent social interactions through ambiguity and disruption of the everyday experience in public spaces.

Chapter 1 - The Decline of Public Space and Meaningful Encounters

1.1 - Public Space and Public Life

This dissertation focuses on the possibility of digital interactive narratives in bringing back meaningful interactions to public spaces. In the context of this research, the idea of a 'meaningful' interaction is taken from the work of James Bohman. In this way an interaction may be 'meaningful' if it first address an indefinite audience. In this sense, any social exclusion undermines the existence of a meaningful interaction. Secondly, it entails people actively engaging as equals in a social discourse.

Previous to the rise of the 'network society' and the rise of the individual, Sennett identified 'public life' as once meaning the vital part of one's life outside the circle of family and close friends. Simmel similarly notes the importance of this life outside of the private realm where one may come into contact with, what he referred to as, the 'stranger,' someone who, "i*mports qualities...which do not and cannot stem from the group itself.*"[1] However, as public spaces have become ever more limited as potential places for social encounters, there is a tendency to pursue these social interactions through online communities and social networks. Yet, as Luke points out, these types of computer mediated communications have the danger of creating communities of not much more than *"an aggregation of atomised individuals organised into discrete geographic-legal units."*[2] Bohman on the other hand highlights the implications of the Internet as a *"unclarified problem in discussions of 'electronic democracy.'"*[3] With the abandonment of the public space, technology has stepped in to close the distance between us all and yet we still lack a clear understanding of the type of interactions that these networks provide.

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[1] Simmel, G. (1950) *The Sociology of Georg Simmel.* New York: Free Press. pp. 403

[2] Luke, T. (1993) 'Community and ecology.' In: S. Walker ed. *Changing Community: The Graywolf Annual Ten*. St. Paul, MN: Graywolf Press. pp.209

[3] Bohman, J. (2004) 'Expanding dialogue: The Internet, the public sphere and prospects for transnational democracy.' In: Crossley, N. and Roberts, J. M. eds. (2004) *After Habermas: new Perspectives on the Public Sphere*. Oxford: Blackwell. pp 137-138

For Sennett, the public realm can be simply defined as a place where strangers meet. Gathering together strangers allows certain kinds of activities which are impossible in the intimacy of the private realm. In public, people can discuss and debate with others who may possess very different cultural backgrounds, interests and assumptions. Interacting with such strangers affords people an opportunity to thus access unfamiliar knowledge and information. The public realm is, traditionally at least, a place, which is why any exploration of public life is invariably tied to cities, markets, theatres and town squares. Yet, the rise of technology has dramatically transformed the sense of place; the public realm can be found in 'cyberspace' as much as physically on the ground. Indeed for Habermas, the mass-produced newspapers which first appeared in the eighteenth Century are, for instance, in his view a public realm, their pages encouraging readers to think and discuss what they read. However, Sennett still argues that the public space par excellence can be found in the Agora of ancient Greece where, as a place of assembly that had no visual barriers or compartmentalisation, but zones of transition between public and private, permitted encounters with individuals of differing opinions and thoughts, challenging the growth of the individual and the assemblage. This model of public life, as a place filled with casual encounters as well as diversity of interests and opinions will provide the best context to analyse the pubic 'places' created by the rise of technology.

1.2 – Modernist Architecture and the Decline of Public Space

In modern society the notion of the public realm being intrinsic to one's development, or indeed associated with public space in the traditional sense, cannot be seen in the same way as Sennett's description of the Agora in ancient Greek life. The modernist movement, arising at the beginning of the twentieth century, brought about changing approaches to urban design which led to the decline of public spaces and consequently any opportunities for meaningful interactions within them. Among these changes, Robert Park points to the a *"substitution of indirect, [...] for direct, face to face, 'primary' relations in the associations of individuals in the community,"*[4] as well as an

[4] Park, R. (1969) 'The City: Suggestions for the Investigation of Human Behavior in the City Environment' In: Sennet, R. ed. *Classic essays on the culture of cities.* New Jersey: Prentice-Hall inc. pp. 100

increased homogenisation of space and more impersonal modes of navigating through the city.

Sennett argues that this tendency of modernest urban design strategies towards a homogenisation of space was a result of an 'over-determination' in their designs whereby the city was broken up into distinct functions for specialised functions. An extreme example of this can be seen in Le Corbusier's 20th Century 'Plan Voisin' for Paris **(fig. 1 & 2)**. All the elements of Voisin - social, architectural, and enomical were planned to be organised into discreet sections in advance of use. The architect proposed to literally raise up the city off of the street, giving over the street to circulation and traffic believing that: *"The street wears us out. And when all is said and done we have to admit it disgusts us. Then why does it still exist?"*[5] The result was the breaking up of the built environment into standardised functions and discreet districts giving rise to what Sennett described as "*an impersonal theatre of human interactions.*"[6] This movement away from the public space and the rise of what Riesman terms the 'lonely crowd' led to an increasing need for surveillance. Goheen notes this movement of CCTV extending out from private residences and shopping malls into publicly owned spaces of cities where, *"Peoples' collective rights to performance and speech are entrenched."*[7] Fyfe and Bannister, referring to Bentham's Panopticon, argue that CCTV induces a state of conscious and permanent visibility that regulates the activities of civil society while Lefebvre identifies this over-repressive society as a terrorist society, which ultimately *"directs adaptation into the channels of 'purely' private experience - the family, the home."* [8]

Essentially, according to Sennett, this destruction of street life was realized in the 'closed' designs of suburban growth, the replacement of high streets by mono-function shopping malls, gated communities, and hospitals built as isolated campuses.

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[5] Fondation Le Corbusier (2004) *Plan Voisin, Paris, France, 1925.* Available at :http://www.fondationlecorbusier.fr/corbuweb/morpheus.aspx?sysId=13&IrisObjectId=6159&sysLanguage=en-en&itemPos=2&itemSort=en-en_sort_string1%20&itemCount=2&sysParentName=Home&sysParentId=65 [Accessed 8 Feb 2013]

[6] Sennett, R. (1986) *The fall of public man.* Cambridge: Cambridge University Press. pp. 13

[7] Fyfe, N. and Bannister, J. (1996) 'City watching: Closed Circuit Television Surveillance in Public Spaces.' *Area*, 28 (1) : pp. 37

[8] Lefebvre, H. (2002), *Everyday life in the Modern World* Continuum: London pp.145-146

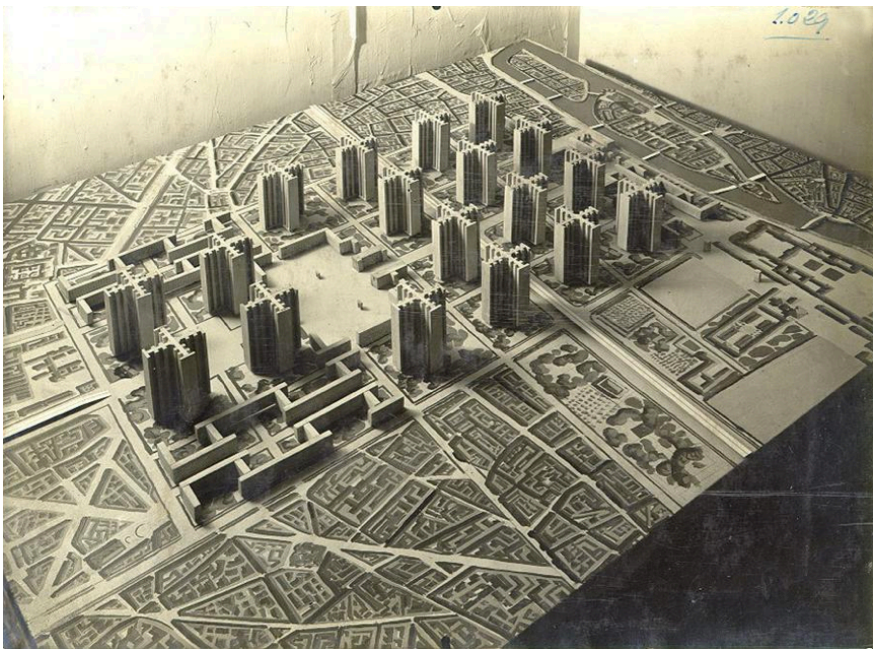

Figure 1: Architects model for Plan Voisin (Fondation Le Corbusier)

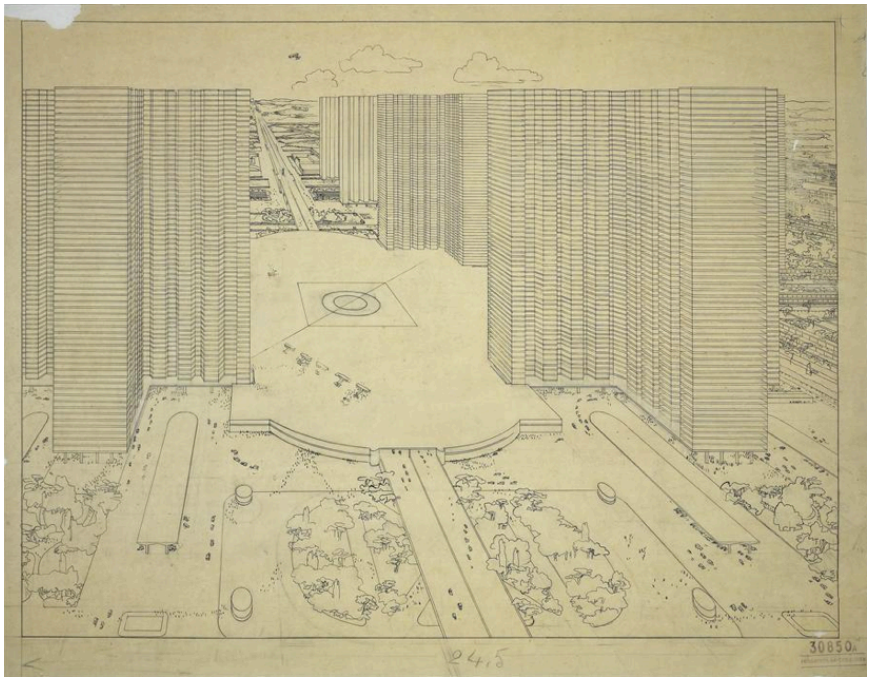

Figure 2: Architects drawing for Plan Voisin (Fondation Le Corbusier)

The proliferation of zoning regulations in the 20th Century is indicative of this over-determined pre-planning and as a result, the street, the public realm of social interaction has become all but removed from the notion of the Agora. The 'over-determined' designs of modernist planning, coupled with the rise of anonymous crowds and consequently of CCTV systems demonstrate the decline of the public space and loss of meaningful interaction within it.

1.3 - Technology and the collapse of Distance : Mass Media

In parallel to, and perhaps even in response to, the movement away from meaningful interaction in public spaces, the rise of mass media and eventually the Internet have increasingly collapsed the distance between people, creating what Marshall Mc Luhan called a 'global village.' In it he described how:

> *"Today, after more than a century of electric technology, we have extended our central nervous system in a global embrace, abolishing both space and time as far as our planet is concerned."*[9]

The one to many format of mass media such as radio and television tangibly reduced the distance between the spectator and broadcaster while at the same time depriving the public of the opportunity to express their opinions in any meaningful way. Similar to the closed, 'over-determination' of modernist planning principles, the one to many communication format led to a weakening of this new public realm. In these new forms of media, the broadcaster is distanced from the spectator where the spectator is silent and passive, and unable to engage in any meaningful conversation or discussion of opinions with the broadcaster. Sennett argued that mass media *"vastly increased the store of knowledge social groups have about each other, but have rendered actual contact unnecessary."*[10] Both Mc Luhan and Augé believe that mass media, especially electricity, has led to

[9] Mc Luhan, M. (1964) *Understanding Media: The Extensions of Man* Cambridge, Mass.: MIT Press pp. 3

[10] Sennett, R. (1992) *The Fall of the Public Man* Cambridge: Cambridge University Press. pp.282

information pouring upon us, *"instantaneously and continuously."*[11] Augé thus declares that this excess of information caused by the rise of mass media corresponds to a situation he calls the 'supermodern.' Another characteristic of excess for Augé, and the most pertinent to the detraction from the public space, is the figure of the ego, the individual. When coupled with the abundance of information and space that he defines as the other factors of excess, Augé argues that never before *"have the reference points for the collective identification been so unstable. The individual production of meaning is thus more necessary than ever."*[12] Therefore Augé argues that, in western societies at least, the individual wants to be a self contained entity. Similarly, Fernback and Thompson point to the fact that with the rise of industrialization and the concept of mass society, "*people became atomized and the social order was characterized by anomie.*"[13] This rise of 'hyper-individualism,' as Tonnies termed it, contributed to the further detachment of public life from public space and thus the desire to define individuality in the private realm. The following section will therefore look at the physical removal from public spaces and into cyberspace engendered by the Internet and the rise of the 'Network Society.' Indeed Rheingold postulates that the very rise of virtual communities can be seen "*as a response to the hunger for community that has followed the disintegration of traditional communities around the world."*[14]

1.4 - Technology and the collapse of Distance : The Network Society

This notion of technology removing the distances between us has accelerated with the introduction of ever more pervasive digital media, being epitomize by the Internet. Castells identifies this as the rise of what he calls the 'Network Society'; a social structure which is characterized by networked communications technologies and information processing. Based on this definition, Castells hypothesized that the network society is

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[11] Mc Luhan, M. Fiore, Q. (1967) *The Medium is the Massage : An Inventory of Effects* Cambridge Mass.: Penguin Books pp.63

[12] Augé, Marc (1995) *Non-Places: Introduction to an Anthropology of Supermodernity.* London: Verso pp.37

[13] Fernback, J. and Thompson, B. (1995) *'Virtual Communities: abort, retry, failure?'* Unpublished paper. Available from: http://www.rheingold.com/texts/techpolitix/VCcivil.html [Accessed 17th January 2013] .

[14] Rheingold, H. (1993) *'*A Slice of Life in My Virtual Community.*'* In: Harasim, L.M. ed. (1993) *Global Networks: Computers and International Communication* Cambridge: MIT Press. pp. 62

organized around two new forms of time and space: timeless time and the space of flows. Castells wrote:

> *"the space of flows […] links up distant locales around shared functions and meanings on the basis of electronic circuits and fast transportation corridors, while isolating and subduing the logic of experience embodied in the space of places."*[15]

By 'space of places,' Castells refers to traditional spaces and the implications of Castells' 'network society' on city spaces needs hardly be elucidated. Yet, this network society offers a theoretical empowerment of the individual through the change from the older topography of one to many model of mass media to a many to many system. This move away from centralization to distribution allows users to become broadcaster themselves as well as facilitating access to and participation in networks all over the globe. Therefore it would appear that the Internet opens enormous possibilities to social encounters, and, ideologically, cyberspace appears to emphasize the principles of diversity of opinions, individuality, and open access. In theory at least the same symbolic interests that define the character of Greek Agora as described by Sennett appear to be present in cyberspace. The next exercise is therefore to examine the possibilities of cyberspace in this context.

1.5 - The Promise of Cyberspace

James Bohman, in *Expanding dialogue: The Internet, the public sphere and prospects for transnational democracy,* outlines the fundamental principles a medium must possess in order for it to provide any form of meaningful interaction. Highlighting that dialogue need not necessarily be modelled on the one to one communication, or of course, happen in a physical space, Bohman states that 'public interaction' must address an indefinite audience. In this sense, any social exclusion undermines the existence of a public act. This indefiniteness, Bohman believes, is required even of face to face interaction; a conversation is public not simply because it may be heard by others but because it can be taken to address anyone. Therefore, *"Communication is 'public,' […] if it*

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[15] Castells, M. (2001) 'Informationalism and the Network Society' In: Himanen, P. ed. (2001) *The Hacker Ethic and the Spirit of the Information Age*, New York: Random House pp. 171

is directed at an indefinite audience with the expectation of a response." [16] Secondly, and implicit in Bohman's first principle, is the idea that the communication must occur in a public place under conditions of freedom and equality in the communicative interaction. In this way, a 'public space' must provide a common, open space for such interactions and also allow for repeated and open interaction. Consequently, these interactions require that technologies and institutions enable its continued existence and provide the opportunities and access to it. Bohman, while discussing the possibility of the Internet for facilitating these types of interactions, notes that the many to many model, although increasing interactivity, does not necessarily retain the fundamental features of dialogue. Peter Ludlow, commentating on the commercialization of the Internet, points to the fact that:

> *"most of these new online spaces are owned by private corporations, and the corporate owners have not always been tolerant of criticism and controversy. Most of the corporations insist that their users sign onerous "terms of service" agreements, which, in some cases, require the user to not criticize the platform owner and often allow the platform owner to ban a user "for any reason or no reason."*[17]

Even if ideologically, it is a free and open space, the Internet could simply be a marketplace as Ludlow argues. Additionally, as we have seen, any social exclusion undermines the existence of a public realm. Bohman recognises that entering into any such social space depends on the requirements of background knowledge and, more fundamentally, access to the Internet. This difficulty has given rise to debates of the 'digital divide' where, as Fernback and Thompson highlight, the ability to afford a computer and an Internet subscription as well as possessing the intellectual knowledge necessary in order to read and comprehend the vocabulary of computers is fundamental to the notion that *"virtual community is a pre-selected community in which, despite the*

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[16] Bohman, J. (2004) 'Expanding dialogue: The Internet, the public sphere and prospects for transnational democracy.' In: Crossley, N. and Roberts, J. M. eds. (2004) *After Habermas: new Perspectives on the Public Sphere*. Oxford: Blackwell. pp.134

[17] Ludlow, P. (2007) '*New Public Sphere: The Return of the Salon and the End of Mass Media'* In: Von Borries, F. Walz, S. and Botteger, M. eds. (2007) *Space, Time, Play.* Berlin: Birkhäuser, pp.214

Internet's egalitarian rhetoric, a true sense of equality will not be tested until the technology becomes widespread."[18]

1.6 - The Promise of Cyberspace : On-Line Communities

The idea of unequal access to the cyberspace is a contentious point. Although the ability to gain knowledge, communicate, and network within cyberspace is, according to Rheingold, the social glue that binds formerly isolated individuals into a community. Mc Cellan, on the other hand, claims that these virtual communities can be as provincial as small town communities and thus criticizes cyberspace communities as 'pseudocommunities' that have only the appearance of true social interactions. These opinions highlight that the idea of meaningful social interactions within a virtual community is still vague concept due to a lack any definitive model about what exactly constitutes community in cyberspace. However, the notion of community must be a 'public' concept in that it entails, as Bohman pointed out, an openness. Yet virtual communities have a private quality about them. Thus, Fernback and Thompson, believe: *"A private character is ascribed to the idea of community as our individuality increasingly defines our choice of community membership, despite the nature of community as a social bond."*[19] A clear manifestation of this segregation in cyberspace can be observed in social networking websites such as Facebook, Google Plus and MySpace. As Sennett argued earlier, the tendency of modernest urban design strategies towards a homogenisation of space was a result of an 'over-determination,' social websites like Facebook can be seen as 'closed' in a similar fashion giving rise to a form of 'pseudosocial interaction.' Social groups and individuals become alienated from each other and, as Castells believes, see the other as strangers, and eventually as a threat. In this process, social fragmentation spreads, as identities become more specific and increasingly difficult to share. Castells offers a concise summary of social movements in cyberspace:

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[18] Fernback, J. and Thompson, B. (1995) *'Virtual Communities: abort, retry, failure?'* Unpublished paper. Available from: http://www.rheingold.com/texts/techpolitix/VCcivil.html [Accessed 17th January 2013].

[19] Fernback, J. and Thompson, B. (1995) *'Virtual Communities: abort, retry, failure?'* Unpublished paper. Available from: http://www.rheingold.com/texts/techpolitix/VCcivil.html [Accessed 17th January 2013].

> *"Social movements tend to be fragmented, localistic, single-issue oriented, and ephemeral, either retrenched in their inner worlds, or flaring up for just an instant around a media symbol […] In a world of global flows of wealth, power, and images, the search for identity, collective or individual, ascribed or constructed, becomes the fundamental source of social meaning."*[20]

Additionally, as Bohman alluded to earlier, the public realm of cyberspace is of course mediated. Since it is software that constructs how communication occurs over the network, *"the Internet's capacity to support a public sphere cannot be judged in terms of intrinsic features."* [21] Thus, as Bohman highlights, the forces that are developing the means to establish virtual communities may have their own agendas, and that by controlling the technology, the developers maintain control over not only their own products, but the development of social interactions in general. This raises serious questions about open access, equality and, by extension, the quality of social interactions in cyberspace.

1.7 - The Promise of Cyberspace : The Challenges of Mediation

Fernback and Thompson believe that the technology associated with computer mediated communications is conversely contributing to problems involving its growing complexity; at the very least by adding another communications medium. The least complex and most informative means of communications is to meet face to face. Unmediated, personal conversation has multiple levels of communication. As the sociologist Goffman, who's work will be examined later, notes, in addition to the words that are spoken, vocal intonations, body language and even the setting carry meaning. The lack of these in computer mediated communications is made abundantly clear *"by the need users feel to invent emoticons to help fill the language gap."* [22] Further, misunderstandings, slippages and mistakes are, as we shall see in chapter three, a vital part of any meaningful

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[20] Castells, M. (2010) *The Rise of the Network Society* Chichester: Wiley-Blackwell pp.3

[21] Bohman, J. (2004) 'Expanding dialogue: The Internet, the public sphere and prospects for transnational democracy.' In: Crossley, N. and Roberts, J. M. eds. (2004) *After Habermas: new Perspectives on the Public Sphere*. Oxford: Blackwell. pp.134

[22] Fernback, J. and Thompson, B. (1995) *'Virtual Communities: abort, retry, failure?'* Unpublished paper. Available from: http://www.rheingold.com/texts/techpolitix/VCcivil.html [Accessed 17th January 2013].

discourse, however with a much more restricted vocabulary these mistakes are much less likely to occur online than they are in face to face interactions. But as we have already demonstrated, face to face communication is becoming less and less common in public spaces. Although computer mediated communications offer a number of advantages over traditional, face to face communication, such as, no preconceptions of another person based on physical appearances, ease of communicating over previously unconceivable distances, and equal amount of input to the conversation among those participating, it would appear that the disadvantages are still quite sizable. Indeed, as Fernback and Thompson demonstrate, each of the advantages could be construed as a disadvantage: "*appearances do matter; conversation should not be based on solely efficiency; and some ideas are more useful than others*." [23] Ultimately, even such proponents of virtual community such as Rheingold, and Schwartz maintain that face to face meetings can be valuable in the formation of a true sense of community. Yet, the streets themselves have become devoid of the diversity that traditionally allowed for these types of interactions to take place. Therefore the question that the next chapter will address is how interactive digital media offer us the possibilities of bringing back meaningful interactions to the public space.

[23] Fernback, J. and Thompson, B. (1995) *'Virtual Communities: abort, retry, failure?'* Unpublished paper. Available from: http://www.rheingold.com/texts/techpolitix/VCcivil.html [Accessed 17th January 2013].

Chapter 2 - Digital Interactive Narratives : 'Open Work' vs The Procedural

2.1 – From the Screen to the Streets

Laurel asserts that: *"technologies offer new opportunities for creative, interactive experiences, and in particular, for new forms of drama. But these new opportunities will come to pass only if control of the technology is taken away from the technologist and given to those who understand human beings, human interaction, communication, pleasure, and pain"*[24]

The migration of computer games onto the street in the form of pervasive games has led to an unprecedented integration of physical spaces back into games. A characteristic of pervasive games is that they expand the gaming space, "*often by reconfiguring the social landscape of cities into a dense grid of game objects, game goals and gameworlds, thus obscuring the demarcations between the real and the virtual."*[25] Truly pervasive games evolve around specific sites and locations. This raises the question of which is more important. Is it the game itself or is it rather the social structure upon which it is set? More importantly, as Walther points out, the pervasive computing evolution liberates the user from the screen and by re-appropriating public spaces, allows for a more direct and physical interconnection of players. This chapter will therefore examine the possibilities of digital narratives set in the physical world to offer meaningful social interactions and the advantages of this form of interaction over procedural generated interaction as epitomized by 'ELIZA.'

2.2 - Digital Interactive Narratives : The limits of the Procedural

In, *The Language of New Media,* Lev Manovich, believing that interactivity is too often used as an umbrella term, attempts to break down interactivity into two distinct factions. 'Closed' interactivity refers to selection from a set of pre-determined choices in a

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[24] Laurel, B. (2003) 'Two Selections by Brenda Laurel' In: Wardrip-Fruin, N. and Montfort, N. eds (2003) *The New Media Reader.* Cambridge: MIT Press pp.563

[25] Walther, B. (2007) 'Pervasive Gamespaces: Gameplay Out in the Open' In: Von Borries, F. Walz, S. and Botteger, M. eds (2007) *Space, Time, Play.* Berlin: Birkhäuser, pp.290

branching structure, such as selecting a particular aspect of a website. 'Open' interactivity, on the other hand refers to more complex interactions between computer and human in which content is not pre-determined but rather generated in real time in response to the user's input. Closed interaction, although offering some amount of interaction, lacks any kind of significant feedback loop which is necessary for any kind of meaningful discourse. More interesting to the topic of this essay is the notion of 'open' interactivity as a procedurally generated process and as Umberto Eco's 'work in movement.'

Perhaps the most renowned example of procedural generated content can be seen in Joseph Weizenbaum's 'ELIZA,' a computer program that appeared to interact with the user by imitating a therapist. Janet Murray describes how the program used the information given by the participants to make them believe that it was in fact talking back to them in a meaningful way. Murray believes Eliza's credibility is due to Weizenbaum implementing *"rules of discourse that are based on the ways in which a therapist would behave."*[26] The idea of 'rules' and procedurally generating dialogue has given rise to the idea of 'cybertext.' Aarseth describes cybertext as shifting the focus from the *"traditional threesome of author/sender, text/message, and reader/receiver to the cybernetic intercourse between the various part(icipant)s in the textual machine.*[27] Instead of the traditional computer/user relations of traditional interactivity, cybertext suggests the need to think of the user's input as a component in the machine, text and body model. Following on from ELIZA, Murray, coining the term 'cyberdrama,' describes a new type of storytelling where users are given an experience of agency. Agency in this context has meant that: "*the participant's actions have an appropriate and understandable impact on the world the computer presents to them."*[28] Murray believes agency, the pleasure of interactivity, arises from the two properties of the procedural and the participatory. Agency thus requires a script for both the user and the world of the game itself, so that the user

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[26] Murray, J. (1997) *Hamlet on the Holodeck: The Future of Narrative in Cyberspace.* Cambridge, Mass.: The MIT Press pp. 73

[27] Aarseth, E. J. (1997) *Cybertext: Perspectives on Ergodic Literature* Maryland: John Hopkins University Press pp.16

[28] Wardrip-Fruin, N. and Harrugan, P. (2004) *First Person: New Media as Story, Performance, and Game* Cambridge, Mass: The MIT Press pp.1

may *"build up appropriate expectations."*[29] Coupled with procedural and participatory, Murray adds the spatial and encyclopedic. Whereas the first two properties create agency the last two make these procedural environments look as *"extensive as the actual world."*[30] For Murray, these defining properties of 'cyberdrama' mark a reinvention of storytelling itself for the digital medium. The most important aspect that interactive digital media add, is the possibilities of procedurally generated narratives, which, may create plots by establishing rules and structuring the participation of the user.

However, Lister highlights how the quality of interactions afforded by digital media has led some commentators to adopt the use of the term 'configuration' rather than 'interaction.' Lister cites Woolgar who defines configuration as:

> *"[…] designers' attempts to 'define, enable, and constrain' the user, through the design of an object which will 'define and delimit' the user's possible behaviours." In this sense technologies 'configure' us, affording particular kinds of behavioural patterns."*[31]

So whereas the term 'interaction' implies a two-way communication, 'configuration' suggests a two-way, *"mutually constitutive process through which both user and software are dynamically engaged in refashioning one another in a feedback loop."*[32] Examining the idea of cybertext further, Aarseth demonstrates how, in the seventies, artificial intelligence researchers focused on making systems that could analyze and write stories. A well-known project was James Meehan's program 'Tale-spin,' which could procedurally construct simple animal fables of the Aesop type. Primarily, the researchers were not trying to achieve literary success. However, Aarseth highlights how some of the 'failures' produced by Tale-spin make *"strikingly original prose, succeeding where the successes*

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[29] Murray, J. (2004) *From Game-Story to Cyberdrama* in Wardrip-Fruin, N. and Harrugan, P. eds *First Person: New Media as Story, Performance, and Game* Cambridge: MIT Press pp.10

[30] Murray, J. (1997) *Hamlet on the Holodeck: The Future of Narrative,* Cambridge, Mass.: The MIT Press. pp.282

[31] Lister, M. (2003) *New Media: A Critical Introduction*, London: Routledge. pp.24

[32] Lister, M. (2003) *New Media: A Critical Introduction*, London: Routledge. pp.24

failed."[33] Although 'failure' in the feedback loop between computer and user can break down and possibly produce insightful moments, Manovich believes that interactivity in commercial culture must be "*fully controlled and scripted."*[34] Hence why it is common for film producers to test a finished edit of a new film before a focus group. The responses of the viewers are then used to re–edit the film to improve comprehension of the narrative or to change the ending.

This leads us to the question as to how meaningful interaction is achievable through digital media. The fact that procedurally generated interactive media only allow users to follow pre-programmed, objectively existing experience, while online virtual communities appear to be closed and segregated demonstrates that face-to-face interaction is still, as an unmediated experience far more meaningful than computer mediated interactions. However, as mentioned in the introduction to this section pervasive games allow is to re-appropriate public spaces and as such offer us more direct and physical interactions. Digital interactive narratives that are set in the physical world are not bounded by the rules of a programmer as is the case with procedurally generated interactions. Additionally if the work is open enough it may even facilitate chance encounters between strangers. Therefore, to oppose the idea of procedurally generated interaction this paper proposes the 'Open work' of Umberto Eco as a means of bringing meaningful interactions back into public spaces.

2.3 - Digital Interactive Narratives as 'Open Works'

Eco's 'open work' refers to a methodology for the communication of art. It concentrates on how an artist may deliver the meaning of the work to the audience. Eco offers two components in the creation of open artwork: multiplicity of meanings, and audience participation through a structural openness. With digital technology, artists in interactive art can have the opportunity to create a pice of work which changes in a response to an audience action. Accordingly, much interactive artwork involves live

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[33] Aarseth, E. J. (1997) *Cybertext: Perspectives on Ergodic Literature* Maryland: John Hopkins University Press pp.8

[34] Manovich, L. (2002) Models of Authorship in New Media. Available from: www.manovich.net/DOCS/models_of_authorship.doc [Accessed January 30, 2013]

performance and web art which are in a mode of constant change through audience interaction.

The term ‘open work’ has a broad range of meanings. Eco posits that all artwork is, in a sense, open. Interpretation happens at all levels of human perception and that therefore, different individuals arrive at different understandings of artwork. Umberto, citing the example of a piece of instrumental music, highlights *“the considerable autonomy left to the individual performer in the way he chooses to play the work.”*[35] Not only is one free to interpret the composer's instructions as they wish, but he must impose his judgment on the form of the piece, as when he decides how long to hold a note or in what order to group the sounds:

> *“all this amounts to an act of improvised creation and thus appeal to the initiative of the individual performer, not as finite work which prescribe specific repetition along given structural coordinates but as ‘open’ works.”* [36]

For Eco, when someone observers a work of art they do so through their own perceptual lens, inevitably tainted by a defined culture, a set of tastes, personal inclinations, and prejudices. In this way ones comprehension of the original artifact is always modified by a particular and individual perspective. This occurrence, Eco describes, as an ‘open work’ in that the user can assign their own interpretation to the a finished piece. However, one is limited to just that, a personal interpretation. More importantly, Eco, returning to the example of instrumental music, believes that here is something more ‘open’ in a far more tangible sense with his example of instrumental music: *“In primitive terms we can say that they are quite literally ‘unfinished’: the author seems to hand them on to the performer more or less like the components of a construction kit.”*[37] Citing Pousseur, Eco points to the fact that the poetics of the ‘open’ work tends to encourage ‘acts of conscious freedom’ on the part of the performer and place him at the focal point of a network of limitless interrelations. Within this structural openness, where the participant is free to assemble the

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[35] Eco, U. (1989) *The Open Work*. Cambridge, Mass.: Harvard University Press. pp. 47

[36] Eco, U. (1989) *The Open Work*. Cambridge, Mass.: Harvard University Press. pp. 48

[37] Eco, U. (1989) *The Open Work*. Cambridge, Mass.: Harvard University Press. pp. 49

components, one may choose to set up their own form without being influenced by the definitively prescribed organization of the author.

Eco identifies these types of open works as something fundamentally new in that they invite us to identify inside the category of 'open' works a further, classification of works which can be defined as 'works in movement,' because they characteristically consist of unplanned or physically incomplete 'structural' units. Eco offers us the example of Joyce's 'Finnegans Wake' suggesting that as the elements of the narrative are no longer tied together with term-to-term determination, it is up to the listener to place himself deliberately in the:

> *"midst of an inexhaustible network of relationships and to choose for himself, his own modes of approach, his reference points and his scale, and to endeavor to use as many dimensions as he possibly can at the same time and thus dynamize, multiply, and extend to the utmost degree his perceptual faculties."*[38]

Therefore in the 'work in movement' the author offers the performer a work to be completed. He does not know the exact fashion in which his work will be concluded, but he is aware that once completed the work in question will still be his own.

Inherent in the open work is the possibility of chance, of failure even. Leaving the development of a piece of work up to the users input has essentially limitless iterations. As previously, mentioned the pervasive computing evolution liberates the user from the screen, allowing for a more direct and physical interconnection of player and public spaces. If we additionally consider that a pervasive piece of work may act as Eco's 'work in movement,' one can imagine the inexhaustible network of relationships that may come into being by setting such an open work in the public realm. If the participant is working within a loosely defined framework while moving about the city, for instance, by being given a start and end objective, but being essentially free to construct the in-between themselves, the possibilities for chance encounters and transgression of boundaries go far

[38] Eco, U. (1989) *The Open Work*. Cambridge, Mass.: Harvard University Press. pp. 55

beyond the fully controlled and scripted procedural work. The implications of these encounters will be examined through a case study in the following chapter.

2.4 - The Emancipated Spectator

As we have seen, pervasive digital media affords us an opportunity to re-appropriate public space, while the work of movement offers us some possibility of creating engagement and transgression of boundaries. However, there is one conceptual framework that must be put in place before we can begin our analysis of the case study. For Sennett, the theatre serves as a vehicle for understanding behavior in public. "*The classic ideal of the theatrum mundi attempted to convey one union of aesthetics and social reality. Society is a theatre, and all men are actors."*[39] As previously elucidated, Sennett argues that the demise of the public realm resulted from an increased absorption of the self resulting in people becoming less expressive and artistic in daily life because *"they are unable to tap the fundamental creative strength of the actor, the ability to play with and invest feeling in external images of self."*[40] In a society with a strong public life, Sennett suggest that there must be an affinity between the domains of stage and street; there should be something comparable in the expressive experience crowds have had in these two realms. Therefore, in order to engage in a public space requires an aspect of theatricality. However, Ranciére highlights the contradictions inherent in contemporary theatre in the imbalance of audience and spectator. If, as Ranciére believes, theatre remains the only place of direct confrontation of the audience with itself as a collective, "*It means that'theatre' remains the name for an idea of the community as a living body."*[41] Yet, paradoxically, being a spectator in contemporary theatre implies passivity, being separated from the capacity of knowing in the same way as being separated from the capacity of acting.

Ranciére's idea of the *'Emancipated Spectator'* on the other hand promotes a model where everyone's knowledge and capacities are respected and valued:

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[39] Sennett, R. (1986) *The fall of public man.* Cambridge: Cambridge University Press. pp. 313

[40] Sennett, R. (1986) *The fall of public man.* Cambridge: Cambridge University Press. pp. 37

[41] Ranciére, J. (2007) 'The Emancipated Spectator' *Artforum*, March 2007 pp.274

> *"the 'ignorant master' […] does not teach his knowledge to the students. He commands them to venture forth in the forest, to tell what they see, what they think of what they have seen, to check it and so on."*[42]

For Rancière, spectatorship is the normal position, not just unique to artistic practices. Ranciére's notion of theater does not encourage spectators without agency to recognize their situation and do something about it. Instead it highlights an understanding that everyone has something to add to the conversation and viewpoints to be expressed. This approach, or model for theatre, is one which compliments the idea of the open work of Eco, and indeed Ranciére believes that the emancipated community, is in fact: *"a community of storytellers and translators."*[43]

The idea of interaction in theatre is of course not a new one. Ranciére examines Brect's Epic Theatre where the theatrical mediation makes the prompts the spectator to become aware of the social situation in which they find themselves, though, as Boal notes *"Even in Brecht, it is the dramatist, not the citizen, who chooses the word."*[44] Similarly, in Artaud's theatre of cruelty makes the spectator leave the position of passive spectators and become surrounded by the performance, dragged into the circle of the action which gives them back their collective energy. Thus, as Ranciére notes, Artaud's approach assumes a pre-constituted subject to be molded, challenged and incorporated within discourses. Ranciére's alternative perspective on the effort to emancipate the spectator highlights the fundamental flaw in art that aims to mobilize the viewer. The assumption that the viewer needs to be educated or inspired by the artist can implies an unequal relationship. This is what emancipation means: the blurring of the opposition between those who look and those who act, they who are individuals and they who are members of a collective body.

Therefore to achieve this level of 'open work' necessitates a level of interaction in a work that allows for the participation of the users. Dixon provides provides an a hierarchy of interactivity that digital artworks may help to engender. These levels are: *"(1)*

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[42] Ranciére, J. (2007) 'The Emancipated Spectator' *Artforum*, March 2007 pp.275

[43] Ranciére, J. (2007) 'The Emancipated Spectator' *Artforum*, March 2007 pp.278

[44] Boal, A., (2008) *Theatre of the Oppressed* Sidmouth: Pluto Press. pp.20

Navigation, (2) Participation, (3) Conversation, (4) Collaboration."[45] Dixon defines collaboration as a form of interactivity where the user's input is free, open, and, more importantly, has the possibility to change what happens. Clearly, if a work is to allow the idea of the 'emancipated spectator,' it must reach collaboration where participants are actively involved in the construction of their own experience. Such collaborative experiences may be found in the emergence of pervasive games where the migration of computer games onto the street has led to an unprecedented integration of our physical spaces into games.

This dissertation will examine such a work in chapter three and its possibilities for creating meaningful social interactions in the public realm using the principles embodied in Umberto Eco's 'open work,' James Bohman's prerequisites for meaningful discourse, and Ranciére's 'emancipated spectator.' The concept of pervasive games, and thus the possibilities of bringing such narratives out into public places, will therefore be elaborated on before beginning such an examination.

2.5 - The Pervasive Game

As Nieuwdorp states, the origins of pervasive games can be found in the computer science research field of pervasive, or ubiquitous computing. However, in the context of these games, the meaning of 'pervasive' is different from that in a computer science context. In this case, they refer not so much on the technological features of the game, but, more specifically, to the type of gameplay that it affords. Pervasive gaming is a genre of gaming which seeks to blur and break the traditional boundaries of games by extending the gaming experiences out into public spaces. Thus, the pervasive computing evolution offers the possibility to liberate the user from the screen and provide an opportunity for more direct face to face and physical interconnection of players lacking in the disembodiment of cyberspace.

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[45] Dixon, S. (2007) *Digital Performance: A History of New Media in Theatre, Dance, Performance Art, and Installation.* Cambridge, Mass.: The MIT Press pp.563

The key innovation that pervasive technology offers, is in creating an indexical relationship of gameworld and physical world. In more traditional games the gameworld is limited to a specific place at specific times to be played by specific people, giving rise to what Huizinga termed the 'magic circle.'

> *"All play moves and has its being within a play-ground marked off beforehand either materially or ideally, deliberately or as a matter of course [...] All are temporary worlds within the ordinary world, dedicated to the performance of an act apart.*" [46]

The conceptual 'magic circle' of play is a temporarily constructed, agreed upon structure that is placed within the physical world. However, developments in digital games and ubiquitous computing have led to "*techno-critical ruptures of the magic circle of play; and toward the discovery of more platforms for meaningful interaction in everyday life, respectively."*[47] In this way, rather than the gameworld being a fixed place within the world, the circle can expand to the point where a whole city may become part of a gameboard. Dave Szulborski advises that *"the goal is not to immerse the player in the artificial world of the game; instead, a successful game immerses the world of the game into the everyday existence and life of the player"*[48] This openness allows the player to become unchained from their consoles and experience a game that is interwoven with the everyday world and potentially available at any place, at any time. This expansion of the magic circle is therefore seen by many academics to be it's defining feature and hence Montola's definition of pervasive games as: *"a game that has one or more salient features that expand the contractual magic circle of play socially, spatially or temporally."* [49] The key characteristic of pervasive games is that they expand the gaming space thus obscuring the demarcations between the real and the virtual and consciously exploit this ambiguity producing a myriad of possibilities for social interactions in public space. Therefore the

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[46] Huizinga, J. (1955) *Homo Ludens: A Study of the Play-Element in Culture* Boston: The Beacon Press, pp. 10

[47] Montola, M. (2005) 'Exploring the Edge of the Magic Circle: Defining Pervasive Games.' *Proceedings of Digital Arts and Culture*. IT University of Copenhagen, 1-3 December. pp. 2

[48] Szulborski, D. (2005), *This Is Not A Game: A Guide to Alternate Reality Gaming,* New Fiction Publishing: Macungie PA pp.31

[49] Montola, M. (2005) 'Exploring the Edge of the Magic Circle: Defining Pervasive Games.' *Proceedings of Digital Arts and Culture*. IT University of Copenhagen, 1-3 December. pp. 2

defining factors of pervasive gaming, spatial, temporal and social expansion, will be expanded here briefly before a more in depth discussion in the case study begins.

2.5.1 - Spatial Expansion

Pervasive games offers us an interesting opportunity to counter the decline of public spaces that resulted from 'over-determinism' in modernism planning. As previously discussed, the division of the city in zones of predetermined functions and the use of grid-like designs led to a homogenisation of space. However, the spatial expansion inherent in pervasive games, turns the city into a gameboard allowing participants to cross boundaries and go places they would not normally go. Indeed Montola specifically states that, *"Ideologically it can be seen as a way of reclaiming public spaces for people."* [50] Of course this also involves challenges of causing unwanted public disturbances, or risking the expansion of games to places where they definitely should not be played.

2.5.2 - Temporal Expansion

Temporal expansion ties in with the idea of social expansion. As Staffan Björk highlights, the temporal span of the game is often obscured to the point where the duration of gameplay comes into question. In leading the player to be unaware of whether they are playing at a given moment or not, temporal expansion offers opportunities for interlacing games with everyday life.

2.5.3 - Social Expansion

Perhaps the most significant consequence of the expansion of Huizinga's 'magic circle,' in the context of this essay, takes place when the game expands socially. While spatial expansion allows participants to cross physical boundaries and bring them to unexpected places where they would not normally go, social expansion blurs the boundaries between player and spectator bringing participants into unexpected encounters

[50] Montola, M. (2005) 'Exploring the Edge of the Magic Circle: Defining Pervasive Games.' *Proceedings of Digital Arts and Culture*. IT University of Copenhagen, 1-3 December. pp. 2

with other people. In pervasive games it can be difficult to judge which people in one's vicinity are other players or simply passersby, which, most importantly, as pointed out by Zagal, can lead to opportunities of community forming by encouraging *'spontaneous social interaction'*[51] of unknown people. A consequence of this social expansion is that pervasive games are generally designed experiences with a strong potential for emergent, that is to say, unexpectedly complex, group play and performance. Additionally, as Björk notes, since social ambiguity can make players break the traditional boundaries between social groups, it provides an interesting opportunity for making players change their views of other groups of people or at least question their preconceptions about them. Expanding the game space so that the entire city becomes part of the game world, imposes those rules on unaware bystanders, making it an *"empowering means by which to question implicit social contracts by first providing an excuse to break them and then allowing insight into their nature by exposing our unconscious beliefs regarding 'proper behavior.'"*[52] Pervasive games thus hold great potential for allowing players to see their surroundings again with new eyes and to better understand their interactions with other people.

Pervasive games can therefore offer a means to counter the decline of public spaces by helping to eliminate many of the social, spatial and temporal boundaries usually associated with public encounters. Socially expanded games engage in a dialogue with people and society outside the magic circle and as Montola points out *"the act of playacting, the magic circle, provides players with an excuse and an alibi to do things that break social norms."*[53] For this reason transgression is a central element to these type of performance pieces as will be examined under the case study in chapter three.

The piece to be examined is 'A Machine To See With' by the Artists' Group Blast Theory. Led by Matt Adams, Ju Row Farr and Nick Tandavanitj, Blast Theory is a Brighton-based artists' group renowned for using interactive media to create new forms of

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[51] Björk, S. (2007) 'Changing Urban Perspectives: Illuminating Cracks and Drawing Illusionary Lines' in Von Borries, F. Walz, S. and Botteger, M. eds. (2007) *Space, Time, Play.* Berlin: Birkhäuser, pp.278

[52] Montola, M. (2007) 'Urban Role Play: The Next Generation of Role-Play in Urban Spaces' in in Von Borries, F. Walz, S. and Botteger, M. eds (2007) *Space, Time, Play.* Berlin: Birkhäuser, pp.218

[53] Montola, M., Stenros, J., Waern, A. (2009) *Pervasive Games: Theory and Design* San Francisco: Morgan Kaufmann Publishers Inc. pp.124

highly embodied collaborative performance and interactive art. Exploring interactivity and the social and political aspects of technology, Blast Theory seek to confront *"a media saturated world in which popular culture rules, using performance, installation, video, mobile and online technologies to ask questions about the ideologies present in the information that envelops us."*[54]

[54] Blast Theory (2012) 'Biography', http://www.blasttheory.co.uk/bt/documents/Blast_Theory_Biography.pdf Accessed 16 February 2013

Chapter 3 - The Digital Interactive Narrative in Public Spaces

3.1 - 'A Machine to see with'

'A Machine To See With' was commissioned as a piece of 'Locative Cinema' for the Sundance Film Festival in 2010 and places you as a lead character in a classic film heist. From the very first instance the participant is directed to step out of the everyday and perform a very transgressive act, rob a bank. Participants sign up online and hand over their mobile phone number. On the day, they receive an automated call giving them the address they need to go to and once there, the phone rings again. From there a series of instructions, delivered through an automated phone system, leads participants through the city. As you move from hiding money inside a public lavatory, to meeting up with a partner in crime and onwards to the bank, the tension rises. *"You are the lead in a heist movie; it's all about you."*[55]

The work plays with the idea of the city as a cinematic space, as Chris Hedges says in 'The Empire of Illusion,' *"we try to see ourselves moving through our life as a camera would see us, mindful of how we hold ourselves, how we dress, what we say."*[56] Popular culture surrounding the conventions of the genre, make a prescribed back-story unnecessary. It is assumed that the participant will draw upon their knowledge of scenarios, inferred from the familiar signifiers of the mastermind masked behind recorded messages and the division between the public and the participant. The drama is structured as a series location specific nodes and core nodes. The experience is that of an emergent narrative, partially determined by role-playing and following instructions and partially, it would seems, based on chance, where participants may or may not arrives at a location at the same time as each other.

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[55] Blast Theory (2012) *'Biography*,' http://www.blasttheory.co.uk/bt/work_amachinetoseewith.html [Accessed 16 February 2013]

[56] Hedges, C. (2010) *Empire of Illusion: The End of Literacy and the Triumph of Spectacle.* New York: Nation Books pp. 24

3.2 - The Transgressive Narrative

As previously described, 'A Machine To See With' can be seen as a highly transgressive experience where one is asked to constantly cross boundaries, step out of the everyday experience, and in the words of Blast Theory themselves step through a door and become someone completely different. This idea of stepping out of the ordinary is part of Blast Theories ideology of confronting a *"media saturated world in which popular culture rules, […] to ask questions about the ideologies present in the information that envelops us."*[57]

'A Machine To See With,' because it is set in the real world, constantly challenges the rules of everyday behaviour, questioning conventions and social codes embedded in space and architecture. The city becomes subsumed into the performance space thus providing an excuse to break traditional social rules and thus allowing insights into their nature by exposing our unconscious beliefs regarding proper behavior. For instance, early on, the performer is ordered to enter a toilet cubicle and hide whatever money they have on them. Public toilets have a great sense of taboo and are certainly not comfortable places to loiter, even being asked to visit a toilet in a pub without asking is crossing a line. Later on in the performance the act of entering a strange, parked car and meeting a complete stranger within it is another transgressive act and certainly something that would never happen in the real world. Additionally, Blast Theory use other less obvious symbols of crossing boundaries inherent in the urban landscape such as circumnavigating the periphery of the bank **[Fig. 3 & 4]**, getting you to navigate back alleyways, and just before entering the bank the participant stands on the edge of the pavement getting ready for the finale. All of this are acts of crossing boundaries.

In, *The Anthropology of Performance*, Victor Turner describes this idea of stepping out of the ordinary as a 'liminal' experience. Speaking of Ritual and theatre, Turner defines liminality as the quality of ambiguity that occurs in the middle stages of such performances when participants no longer hold their pre-ritual status but have not yet begun the transition to the status they will hold when the ritual is complete.

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[57] Blast Theory (2012) *'Biography*,' http://www.blasttheory.co.uk/bt/work_amachinetoseewith.html [Accessed 16 February 2013]

Figure 3: Blast Theory's 'A Machine To See With' (Blast Theory)

Figure 4: Blast Theory's 'A Machine To See With' (Blast Theory)

In essence, during the liminal stage, normally accepted differences between the participants, such as social class, are often de-emphasized or ignored. For Turner, this engenders a sense of 'comunitas,' "*the liberation of human capacities […] from the normative constraints incumbent upon occupying a sequence of social statuses*.[58] 'A Machine To See With' can be seen as a highly 'liminal' experience. The initial phone call before the performance telling the participant where to go blurs the boundaries between the real and the fictional world. As one walks towards that destination, one is crossing over form one to the other, becoming someone different. The notion of communitas is an important one from the perspective of fulfilling one of Bohman's conditions for meaningful and democratic discourse. If communitas does indeed offer us an opportunity for *"unhierarchised, undifferentiated social relations,"*[59] then surely it prescribes Bohman's requirement by providing us a means by which to overcome the difficulties involved in entering a social space as equals. Ericsson, discussing live action role play, points out:

> *"within our liminoid games, we are starting to discover ways of acting and being together that are ultimately more human and humane than the order that surrounds us. Play itself is becoming a valid ideology as a vision of constantly renewable co-creation of meaning is emerging."*[60]

Errison points out that the very act of role playing is the most important separation made by players from their social position, a trait that he believes theatre and games share with many other ritual systems. By placing their social roles aside, and accepting new ones the participants make ready to cross into the main part of the role-playing rite, the 'liminal or transitional phase.' In 'A Machine To See With,' Blast Theory ask you to *"step through a door and become someone completely different."*[61] In essence shedding their former selves

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[58] Turner, Victor (1988) *The Anthropology ofPerformance*. New York: PAJ Publications. pp.33

[59] Mary Douglas, (1999) *Implicit Meanings, Selected Essays* in Anthropology New York: Routledge. pp. 104

[60] Erricson, M., (2004), 'Reading Victor Turner's 'Liminal to Liminoid, in Play, Flow, and Ritual; An Essay in Comparative Symbology," In Montola, M. Stenros, J. eds. *Beyond Role and Play,* Finland: Solmukohta: Ministry of Education pp.26

[61] Blast Theory (2012) *'Biography*,' http://www.blasttheory.co.uk/bt/work_amachinetoseewith.html Accessed 16 February 2013

along with their entire socio-moral luggage before entering the game. In this sense the pairing of strangers is very important in 'A Machine To See With.' In this case being drawn together in a complicit, transgressive act there is a sense of communitas, a breaking down of the regular rules of society, you are both here to commit a crime. In the performance participants are meeting a stranger, they have no idea who they are, what their social status may be, but now they are both to be outsiders, the embodiment of bank robbers. Of course participants don't actually rob a bank, the climax of 'A Machine To See With' is all about leading participants to an edge and then pulling them back.

The final event returns to the interaction of strangers. This time, furthering the blurring the boundaries between the real and fictional, the participant is invited to step across the boundary of the world of the game, into the real world, and engage with a member of the public. The participant is given the chance to give the money they had previously hidden to a complete stranger in a backdrop of a games arcade. One can imagine that the intention of Blast Theory here is to take the experience of 'communitas' created during the performance and bring it back into the real world.

liminality ultimately requires its participants to meet each other free from the ego-mongering and constant role-playing of society: *"Communitas is the experience of moving beyond and outside our prison-selves, […] and in doing so suddenly seeing each other not as targets of transactions to benefit our own ambitions, but as part of an Essential We, as parts of a Communitas."*[62] As previously mentioned, the liminal phenomenon allows us to fulfill Bohman's requirement for social engagement to be equal as it was described by Sennett in the ancient Greek Agora. Yet in order for these interactions to be meaningful they must also address the indefinite audience. Which we shall now attempt to do so by examining 'A Machine To See With' from the aspect of Umberto Eco's open work.

3.3 - Ambiguity in the 'Work in Movement'

As Eco believes, every work of art is inevitably 'open,' yet only certain works are 'works of movement.' While the emphasis of Eco's text is musical and literary works, his

[62] Turner, Victor (1988) *The Anthropology ofPerformance*. New York: PAJ Publications. pp.33

theory can easily be applied to other media, in particular an urban media arts practice focused upon the experience of a city on its streets. The goal of 'works of movement,' as defined earlier, is not to craft a particular kind of interaction but to inspire particular kinds of experiences. In 'A Machine To See With' there is a prescriptive narrative that follows a linear progression. Yet, participants do not simply contemplate or watch a narrative unfold as a spectator does. From the first phone call they receive, they are active in the unfolding of the narrative. In 'A Machine To See With,' the time and space of the narrative is of course, dependent on real time and space. The spectator is present, sharing that space with the developing narrative; the engagement is interactive; and the narrative representation is coincident with the physical world. This indexical relationship of gameworld and physical world, characteristic of pervasive media, allows everything within the real world to be directly read into the game. However as the physical world is volatile and unpredictable there is a never-ending play of changing conditions between the relatively fixed parts of the work, the nodes of interaction in the narrative, and the 'unexpected' or undetermined parts. In fact, we may move in and about the work at any pace or in any direction we wish. Dias, interviewing Blast Theory, examined how this works of movement model facilitated 'failure,' whereby he observed :

> *"failure to follow the instructions relayed by the 'machine,' getting lost and asking a (clueless) bystander for information on directions,[...] and even failure to complete the performance due to previous participants hijacking it"*[63]

Thus pervasive games like 'A Machine To See With' afford an opportunity for participants to engage with complete strangers. Indeed, as Staffan Björk highlighted, the effects of social ambiguity in pervasive games point to the fact that it can be difficult to easily judge which people in one's vicinity are other players. Since social ambiguity can make players break the traditional boundaries between social groups, this aspect of pervasive games has a strong potential for making players change their views of other groups of people or at least question their preconceptions about them. This may be an intended effect of game design, or as is the case with 'A Machine To See With,' a serendipitous process that occurs

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[63] Dias, M. P. (2012) 'A Machine to See With (and Reflect Upon): Interview with Blast Theory Artists Matt Adams and Nick Tandavanitj.' *Liminalities: A Journal of Performance Studies* Vol. 8 Issue 1 pp.4

during gameplay. Either way, it may be described as 'spontaneous social interaction.' [64] In this process, a participant's experience of the urban space and the awareness of strangers in that space is heightened, and the fissures between fiction and real life bring you into 'accidental' or 'chance' social encounters engendered by a 'work of movement.' In a very prosaic way, 'A Machine To See With' pairs complete strangers together so that they can work together and plan to rob a bank. More importantly though, because 'A Machine To See With' expands the traditional 'magic circle of gameplay' to cover the entire city, it raises ambiguity as to whether a person, is an actor, another participant, or just an innocent passerby. As such these social interactions would appear to fit the second prerequisite of Bohnam's meaningful interaction in the public sphere described earlier:

> *"communication must address an indefinite audience. In this sense, any social exclusion undermines the existence of a public sphere. This indefiniteness is required even of face-to-face interaction, since a conversation is public not simply because it could be heard by others but to the extent that it could be taken to address anyone."*[65]

Social acts are public only if they are directed to an indefinite audience but must also be offered with some expectation of a response, especially with regard to interpretability and justifiability. Spatial ambiguity in such performance pieces as 'A Machine To See With,' when coupled with Eco's model of 'work in movement' can certainly lend itself to creating such interactions.

3.4 - Dynamic Feedback Loops

In the previous section we briefly alluded to the idea that theatre is community. 'A Machine To See With,' because of it's structural openness, social, and spatial ambiguity, allow the performer to act as Ranciére's 'emancipated spectator.' The performer may

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[64] Zagel, J.P. Nussbaum, M. Rossa, R. (2000) 'A model to Support the Design of Multiplayer Games.' *Presence: Teleoperators & Virtual Environments*, Vol. 9 Issue 5, p448-462, pp.4

[65] Bohman, J. (2004) 'Expanding dialogue: The Internet, the public sphere and prospects for transnational democracy'. In: Crossley, Nick and Roberts, John Michael ed. (2004) *After Habermas: new Perspectives on the Public Sphere*, Oxford: Blackwell. pp.134

"*venture forth in the forest, to tell what they see, what they think of what they have seen, to check it and so on.*" [66] Intrinsic to this idea of performance is a feedback loop of action, reaction and reflexivity. When participants engage with strangers or preform transgressive acts as described earlier they do so through this feedback loop, which, precisely because it is set in the physical world, can be open to essentially a limitless number of experiences and more importantly, the idea of reflexivity suggests that in taking part in such interactions participants may begin to implicit social contracts.

The idea of 'failure' as a result of spatial ambiguity allowed for the creation of emergent social interactions. We can also say that these 'failures' occurred because of a break down in the feedback loop. Whereas, in digital games the game world is predefined and human input limited to a predetermined script, 'A Machine To See With' mixes technology with the unpredictability of the real world and human interaction; there is always the possibility of slippages and accidental malfunctions. Goffman, describes the interplay of human behavior in public interactions as just such a feedback loop. When we interact with another individual we seek to acquire information about that person, through the information that person gives and the expressions given of. Simultaneously, that individual also attempts to control the conduct of others by adopting an appearance that that will lead others to act in accordance with their plans. Thus Goffman, believes we enter into a *"kind of information game - a potentially infinite cycle of concealment, discovery, false revelation, and rediscovery"*[67] Goffman's information game indicates a dynamic form of feedback that involves, action, followed by reaction and then reflection. In an embodied performance such as 'A Machine To See With' information is in constant dialogue and can easily fail. Therefore, even if the structure is rigid and linear, as is the case in 'A Machine To See With,' information can still break down leading to unforeseeable possibilities and allowing emergent social interactions to materialise. Therefore, the enactment of performativity through embodied practices highlights the importance of accidental malfunctions, slippages and conflicts, something that an open work like 'A Machine To See With' Facilitates.

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[66] Ranciére, J. (2007) 'The Emancipated Spectator' *Artforum*, March 2007 pp.275

[67] Goffman, E. (1974). *Frame Analysis: An Essay on the organisation of Experience*. Cambridge, Mass.: Harvard University Press, pp. 57

Perhaps the most important aspect of this feedback loop is the idea of reflexivity. Returning to Goffman's information game we can see that no two interactions are the same. More importantly, Goffman believes that when we knowingly repress certain part of our character in order to appear socially acceptable it *"points out a crucial discrepancy between our all-too-human selves and our socialized selves."*[68] This view is echoed by Victor Turner who later stated *"Man is a self-performing animal, his performances are, in a way, reflexive, in performing he reveals himself to himself."*[69] In Victor Turner's definition of the individual as a self-performing animal, reflexiveness, much like it is in Goffman's, is highlighted as a defining aspect of performance. Both Goffman's information game and Turner's Reflexivity indicates a dynamic form of feedback that involves, action, followed by reaction and then reflection. Therefore these types of open work not only physically bring us back into the public realm and offer us a chance at meaningful engagement but also, precisely because they are reflexive, they allow us to question the implicit social contracts we encounter within the performance world and bring those lessons back into the real world. As Ranciére would point out, these are lessons we learn ourselves, as a result of interacting with the narrative. The final act of 'A Machine To See With' tried to step beyond the game world and engage another human in a generous act, the reflexive nature of performance similarly allows us to step out of the game world but also take some of the occurrences such as the questioning of social class with us as we do so.

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[68] Goffman, E. (1974). *Frame Analysis: An Essay on the organisation of Experience*. Cambridge, Mass.: Harvard University Press pp. 56

[69] Turner, Victor (1988) *The Anthropology ofPerformance*. New York: PAJ Publications. pp.81

3.5 - Conclusion

This dissertation examined the possibility of digital interactive narratives in bringing meaningful interaction back into public spaces. Public space, as described by Sennett, can simply be defined as a place where strangers meet. Gathering together strangers allows certain kinds of activities which are impossible in the intimacy of the private realm. In public, people can discuss and debate with others who may possess very different cultural backgrounds, interests and assumptions. Interacting with such strangers affords people an opportunity to thus access unfamiliar knowledge and information. The agora of ancient Greece was taken as the epitome of public space where the lack of visual barriers or compartmentalisation allowed encounters with those of differing opinions and ideas, challenging the growth of the individual and the assemblage.

However, our analysis of modern urban planning principles showed the decline in importance of the public space through the breaking up of the built environment into standardised functions and discreet districts giving rise to what Sennett described as "*an impersonal theatre of human interactions.*"[70] This led to the retreat of public functions into the private realm and the rise of the 'lonely crowd.' Conversely, the removal of meaning from public spaces led to the need for their surveillance and thus CCTV moved from the private out into the public realm. In parallel to, and perhaps even in response to, the movement away from meaningful interaction in public spaces, the rise of mass media and eventually the Internet have increasingly collapsed the distance between people, creating what Marshall Mc Luhan called a 'global village.' Although more connected than ever before the one to many format conversely deprived the public of any opportunity to voice their concerns in any meaningful way. The over abundance of information brought about by mass media led to the need for the individual production of meaning.

With the rise of the Internet came the promise of cyberspace as a new public 'space' allowing for new forms of social interactions. The many to many format of the network society allows anyone to become a broadcaster. Yet virtual communities are shown to be as segregated and closed as modernist urban designs in the physical world

[70] Sennett, R. (1986) *The fall of public man.* Cambridge: Cambridge University Press. pp. 13

forming 'pseudocommunities.' These forms of networked communication demonstrated that, despite the increase of interactivity, there is a still a lack of openness. Additionally, as Bohman alluded to earlier, since it is software that constructs how communication occurs over the network, the public realm of cyberspace is of course mediated. Thus, as Fernback and Thompson highlight, the forces that are developing the means to establish virtual communities may have their own agendas, and that by controlling the technology, the developers maintain control over not only their own products, but the development of social interactions in general.

The migration of computer games onto the street in the form of pervasive games has led to an unprecedented integration of physical spaces back into games, offering a possibility of bringing back meaningful interactions into public spaces. A characteristic of pervasive games is that they expand the gaming space, often by converting the social landscape of cities into a gameworld, thus obscuring the demarcations between the real and the virtual. The pervasive computing evolution allows for the liberation of the user from the screen and an opportunity to re-appropriate public spaces, facilitating a more direct and physical interconnection of players. Procedural generated interaction is examined and its tendency to script the user and thus *'define, enable, and constrain' the user, through the design of an object which will 'define and delimit' the user's possible behaviours.'*[71] Eco's open work is examined as an alternative to procedural generated content and, additionally, the 'work in movement' is identified as providing the possibility of emergent social interaction. Furthermore Ranciére's 'emancipated spectator' presents a renewed approach to reclaiming the public sphere through embodiment, dialogue and collaboration while providing a useful framework for achieving these goals in digital interactive narratives.

Blast Theory's 'A Machine To See With' was examined using the principles embodied in Umberto Eco's 'open work,' James Bohman's prerequisites for meaningful discourse, and Ranciére's 'emancipated spectator.' This revealed how such narratives set in a public space with a minimum of technology could generate engagement of strangers

[71] Lister, M. (2003) *New Media: A Critical Introduction*, London: Routledge. pp.24

through ambiguity, stepping out of the ordinary, liminal experience and a relatively rigid narrative structure. A key factor in this is the fact that although the narrative itself may be quite fixed, the participants get to each point to activate it is entirely open. Umberto Eco's concept of 'structural openness' where the participants are collaborators in the creation of their own narrative is another salient feature of the success of 'A Machine To See With.' Another important factor is the creation of a feedback loop. Being an embodied performance set in a physical place, this feedback loop or, exchange of information inevitably fails, bringing with it emergent social encounters. This highlighted the possibilities of pervasive games, set in public spaces to induce accidental malfunctions into interactive digital narratives. Thus, the research identified that digital interactive narratives in public spaces can generate new forms of social interaction and reclaim meaning in public spaces. Ranciére's techniques of the 'emancipated spectator' coupled with some of the defining factors of the digital interactive narratives depicted in this paper might open up new forms of reclaiming public life in public spaces.

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Images:

Figure 1 - 'Architects model for Plan Voisin' *Fondation Le Corbusier* [online image], viewed 8 Feb 2013 Available at: http://www.fondationlecorbusier.fr/corbuweb/morpheus.aspx?sysId=13&IrisObjectId=6159&sysLanguage=en-en&itemPos=2&itemSort=en-en_sort_string1%20&itemCount=2&sysParentName=Home&sysParentId=65

Figure 2 - 'Architects model for Plan Voisin' *Fondation Le Corbusier* [online image], viewed 8 Feb 2013 Available at: http://www.fondationlecorbusier.fr/corbuweb/morpheus.aspx?sysId=13&IrisObjectId=6159&sysLanguage=en-en&itemPos=2&itemSort=en-en_sort_string1%20&itemCount=2&sysParentName=Home&sysParentId=65

Figure 3 - 'Blast Theory's 'A Machine To See With' *Blast Theory* [online image], viewed 26 February 2013 Available at: http://www.blasttheory.co.uk/bt/work_amachinetoseewith.html

Figure 3 - 'Blast Theory's 'A Machine To See With' *Blast Theory* [online image], viewed 26 February 2013 Available at: http://www.flickr.com/photos/blasttheory/4994217329/in/set-72157624842395119