

# **INTERACTIVE WORKS FOR URBAN SCREENS:**

A practice based study into building new ways of engaging communities in urban space through interactive artworks for urban screens.

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## **Declaration of Collaboration:**

I have worked in collaboration with Paul Sermon on the majority of Urban Screen artworks outlined in this thesis as my methodology. Paul Sermon and myself have very distinct roles within the work, my focus is on developing interactive digital environments and animations, which focus on ludic play, Paul Sermon researches into telematics, performance and embodiment. This specialism of focus is maintained throughout the practical development of artworks as well as through our written outputs such as papers and book chapters outlined in the appendix. Elements of this thesis feature in my published works, as I have been writing papers and book chapters throughout the development of this study as part of my research outputs for my academic role. Each urban screen installation represents collaboration with the public, without which the work remains incomplete.

## Abstract:

In our urban environment we are surrounded by strangers, observed via surveillance cameras and connected to millions via the global digital infrastructure. Our media is pervasive and immersive, implicit in everything we do, as the distinction between the real and virtual becomes increasingly blurred. Whilst pervasive screens are becoming an essential personal tool, large format public screens form part of the furniture of our urban architecture. This study will ask how we can maximise opportunities for cultural engagement using urban screens and how this can impact on our culture.

In the last ten years urban screens have been installed across the world, including in twenty-two cities in the UK funded by the BBC and Local Authorities for the Cultural Olympiad. The aim of the screens was to address local communities in order to reflect something of their respective location and community, *“with a full programme of locally run community and sporting events”*. (<http://www.bbc.co.uk/bigscreens>) Urban screens have a huge potential to play a role in changing the way that the public engages in urban space. Lucy Lippard identifies “place” as a hybrid of communal memories (Lippard, L. 1997, p9) and proposes that artists play a key role in offering community a framework from which to tackle issues, and debate. Urban screens are usually located in busy shopping centers and are ideally located to attract a broad demographic to contribute to a memory of place embracing an inclusive multicultural and tolerant approach.

Through this thesis I explore how interactive works for urban screens can offer opportunity for public participation in the urban environment. Kristine Stiles and Ed Shanken propose that a key factor in interactive works is that they offer “agency” which involves freedom to make choices and to be creative in order to make a difference. (Stiles, K. Shanken E. 2011, p32) Through my literature review and current creative practice, including urban screen projects in collaboration with telematics artist Paul Sermon; “Picnic on the Screen” for the Glastonbury Festival BBC Village Screen 2009 and “Occupy the Screen” for Connecting Cities Berlin/Riga 2014, I explore how interactive artists can optimise agency, opportunities for play, creativity and self-representation to a diverse audience in order to change the way that we engage in the urban environment. Through this PhD I have developed a framework for engagement with public audiences through play.

# 1. Introduction

*“Orwell only emphasized the negative part, the one way communication. I see video not as a dictatorial medium, but as a liberating one. That’s what this show is about, to be a symbol of how satellite television can cross international borders and bridge enormous cultural gaps...the best way to safeguard against the world of Orwell is to make this medium interactive so it can represent the spirit of democracy not dictatorship.” (Paik N.J. 1984)*

Nam June Paik promotes the opportunities that artworks on urban screens can offer in his “Good Morning Mr Orwell” (1984), a satellite telecast screened on New Year’s Day aimed to celebrate empowerment and freedom. Nam June Paik highlights the importance of “interactivity” to promote “democracy”, in order to liberate rather than manipulate. If urban screens are largely used for information, sport, music and film as public viewing spaces, as demonstrated by the documentation of the BBC Big Screens Facebook site, where the vast majority of posts concern sport and music events (BBC Big Screens Facebook page) this resonates an image of a passive audience engaged in a “spectacular culture” as defined by Guy Debord. (Debord, G. 1995) Freud’s early experience of urban screens furnishes this image further, when in 1907 he records in a letter to his family a state of being transfixed by the moving images projected throughout the evening in a piazza in Rome (interspersed by advertising stills). (Crary J. 1999, p366-367) Walter Benjamin highlighted the importance of a dynamic relationship between artist and audience promoting the idea of the consumer becoming a producer and the spectator, a collaborator. (Benjamin, W. 1978 p101-120) and this was further reaffirmed by Brecht, who proposed that the radio listener should not be isolated, but be allowed to speak and thereby brought into an active relationship. (Brecht, B. 1932 p53-4) Duchamp also promoted the idea that creation of an artwork is a dynamic between artist and viewer the later who contributes to the creative act by bringing the work into the external world. (Kepes, G. 1960 p111-112) In this thesis I explore whether artworks on urban screens have a positive cultural impact, do they contribute to the Orwellian vision of big brother surveillance and control or conversely can they offer opportunity for empowerment, shifting the relationship from passive spectator to active participant and co-creator of artworks? How can artists offer a framework to empower the audience to co-produce, changing the relationship from consumer to producer?

Large Urban Screens are governed by civic control and regulations, but programmers and curators making decisions on the content of the screens have a huge responsibility to the public. Andreas Broeckmann underlines the importance of using the urban screens in a democratic way, arguing that any medium can be used as a tool of propaganda and stresses the need for public access to content development, promoting avoidance of the screens for advertising. (Broeckmann, A. 2009, p109-120) Diversification of content through input by a range of users can only ‘add value to public spaces’. (Yue, A. 2009, p264) Much of the programming on the BBC Big Screens, for example, has been news and sports related and many of the screens including the MediaCityUK screen, have reverted to ownership by the landowners (in this case Peel Holdings), usually the local authority and many are on lease to private companies. This may have implications on the future application and programming of the screens, and could potentially result in their increased use for advertising. It is unfortunate that the huge investment in urban screens made for the Cultural Olympiad has been abandoned as a form of public engagement by the BBC, particularly in the light of comments by sociologist such as Scott McQuire who argues that digital media has reversed old media’s tendency to push us into a private sphere, offering new opportunities to engage in public. McQuire further suggests that artistic practice can potentially change and enhance the way that we experience the urban environment and how we relate to each other. (McQuire, S. 2008, p131) In this age of public spending cuts and austerity can we utilise the opportunities that digital media offers by using the screens for public participatory artworks to facilitate play and public engagement? “Connected Cities” EU consortium describe urban screens as a “*membrane between the digital and the real*”, <http://www.ccnriga.com/about/params/post/187747/connecting-cities-vision> from this perspective the urban screen can act as conduit to bring the virtual and physical together in public spaces. This offers huge opportunity for us to connect both in the local urban environment and globally, giving opportunity to communicate disparate world views but offering the opportunity for communities to work together through creativity as proposed by Richard Sennett. (Sennett, R. 2013) This study will ask how we can maximise opportunities for community engagement using public urban screens and how this can impact on our culture. Through my creative practice based research I offer a framework for the development of open interactive systems in order to maximise agency, creativity and freedom of choice, criteria highlighted as key to interactive systems offering agency. (Stiles, K. Shanken, E. 2011, p32)

## 1.1. Research Questions

Through this thesis I focus on three areas of public participation, interactivity and play to ask:

- How can artworks for urban screens offer opportunities to connect communities, promoting sociability through play, with an inclusive approach to public engagement, offering the audience freedom to communicate and make real choices, maximizing agency and creativity?

Through this thesis I look at the opportunities posed by digital media for public engagement. Scott McQuire argues that artistic practice can potentially change and enhance the way that we experience the urban environment and how we relate to each other. *“While old media encouraged sub-urbanism and individualism, drawing us into the private sphere, digital developments offer opportunity for media to facilitate public engagement”*. (McQuire, S. 2008 p131) Large urban screens are ideally placed to offer opportunity for the public to engage in the urban environment through the digital but how do we orchestrate this? How do we draw a disparate public, of different cultures and sometimes language, together, who are socialised to largely ignore strangers in urban space, in order to promote engagement? Richard Sennett argues that sociability is neither predefined nor natural and identifies ritual and play as essential in the formation of public culture. It is important, therefore to offer a framework to promote this. (Sennett, R. 1986 p29) Playful interaction using large urban screens could offer opportunity for public engagement. The question is divided into three areas:

- How can artworks for urban screens promote social engagement through play, offering opportunities to connect communities and develop alternative ways of relating to each other within the urban environment?

Lucy Lippard highlights the importance of the role of the artist to raise awareness, to draw attention, to dissipate preconceptions and question conventions, opening dialogue around issues. (Lippard, L. 1997 p19) She contends that contemporary communities are diverse, with “hybrid” nonlinear stories and in which homogeny should not be assumed and that “preserved” or catalogued representations can be oversimplified and in this way become

stereotyped. It is however important within a multicultural society, to take risks, to speak to specific groups within the whole, to question and probe, to explore ideas and conventions as well as push boundaries, rather than avoiding issues and thereby not entering into a discourse within communities. (Lippard, L. 1997 p24) Artworks for urban screens can offer an opportunity for diverse groups to interact, promoting understanding of different worldviews and empathy for others. Sharon Daniel argues that this should be addressed by giving the public opportunity for self-representation. (Daniel, S. 2011 p58)

- Can artistic works for urban screens offer a framework for participatory artworks with an inclusive approach to public engagement?

Edward Shanken and Kristine Stiles (Stiles, K. and Shanken, 2011 p32) propose that interactivity does not automatically produce works that offer a real choice, creative voice, a dynamic role or ‘agency’. Interactive works can comprise of a series of options provided by the artist and no real choice or opportunity for personal expression.

- Can we develop an interactive environment that offers opportunities for the audience to co-create, with freedom to communicate and make real choices, maximizing agency and creativity?

These components of play, public engagement and meaningful self-representation or agency are the key components to this study:

## **1.2 Aims and Objectives**

Through three areas of focus: public engagement, play, and open interactive systems, this research aims to:

- Explore opportunities for participants to play through digital media using urban screens to promote sociability, offering opportunities to connect communities and alternative ways of engaging within the urban environment.
- Explore ways that digital media can offer new opportunities to engage the public through participation with artworks on urban screens with an inclusive approach to audience participation.

- Explore methodologies of engagement through open interactive systems in order to maximize opportunities for audience agency and co-creation.

The objectives are to:

- Develop works for urban screens that offer opportunity for play through interactive works, changing the way that we relate to each other in public space, as well as the way that we engage with our environment.
- Explore the potential to engage with the public by offering a third space on screen working with an inclusive approach to audience participation.
- Develop interactive environments for urban screens to maximize audience freedom of creativity, agency and co-creation.

### **1.3 Research Methodology**

As part of my research methodology for this PhD thesis, I have exhibited a number of installations using large urban screens, including “Ludic Second Life” (Gould, C. 2009) commissioned by the BBC Big Screen Liverpool, for “Moves 09”, 25<sup>th</sup> April 2009, which I developed with input from Alasdair Swenson who programmed the motion tracking system in “Second Life”. As a result of this I was invited to develop a collaborative work with Paul Sermon for the BBC Screen at Glastonbury Festival, and hence “Picnic on the Screen” (Gould, C. Sermon, P. 2009) was presented at the BBC Village Screen Glastonbury Festival of Contemporary Performing Arts from the 24<sup>th</sup> to the 28<sup>th</sup> June 2009. Since then, I have worked with Paul Sermon on a number of artworks designed for large urban screens, not all necessarily shown on a permanent large urban screen, these include “Urban Intersections” (Gould, C. Sermon, P. 2009), projected on to the Waterfront Hall (built as part of the Northern Ireland Peace Treaty, completed in 1997), as a “DIY” large urban screen. (“Second Places”, provided access to their “OpenSim” virtual environment, as well as offering motion tracking programming support.) For this project we programmed three artists works including my own, which were exhibited separately but all

took place in the same environment. Paul Sermon and myself built the virtual space collaboratively. “Urban Picnic” was exhibited between Shanghai and the Bluecoats Gallery courtyard, Liverpool on the 21<sup>st</sup> to the 15<sup>th</sup> of April (Gould C. Sermon, P. 2010), and “Urban Picnic Ningbo” (Gould C. Sermon, P. 2011) was shown as part of the DRHA conference between Ningbo and the Lowry theatre, MediaCityUK. Other works developed in collaboration with Paul Sermon include, “All the World’s a Screen” (Gould C. P. Sermon, 2011), “The Seven Stages of Man” (Gould C. Sermon, P. 2011), shown as part of “Future Everything” linking MACBA Study Centre, Barcelona and Umbro Design Centre Manchester (13th May 2011), “All the World’s a Screen” shown at Hangar.Org, Barcelona and Madlab Manchester (28<sup>th</sup> to 29<sup>th</sup> May 2011), as well as “Mirror on the Screen” (Gould C. Sermon, P. 2012), presented at the Nottingham Playhouse (4<sup>th</sup> September to the 30<sup>th</sup> October 2012). “Occupy the Screen” (Gould C. Sermon, P. 2014), exhibited as part of the EU funded “Connecting Cities” consortium linked Riga for the “Capital City of Culture 2014 and Berlin “Supermarkt” for the “Wedding-Moabit Festival” (*see figure 13*). It was the development of the earlier big screen works, which lead to my PhD question, and through the development of the later works that I have been able to test my hypothesis and experiment with the interface, environments and methods of interactivity. “Ludic Second Life”, “Picnic on the Screen”, “Urban Intersections”, “Occupy the Screen” and “Screen Test”, were designed and exhibited on large urban screens. “The Seven Stages of Man”, “All the World’s a Screen”, “Mirror on the Screen” were design for large urban screens but were exhibited in alternative public spaces, such as community workshops, the Bluecoat Gallery courtyard (with a public footpath through to the Liverpool city centre) industry environments (Umbro Design Centre) and theatres (Nottingham Playhouse and the Lowry Theatre), offering an alternative venue to urban screens, and against which I could compare audience engagement and potentially identify the unique qualities that the urban screens can offer. The public spaces that these works were exhibited in potentially attracted a broad audience and often participants who would not usually visit a traditional art gallery. I also developed an interactive toy theatre as part of a group exhibition “The People You’re Not” (Gould, C. 2011) at the Cornerhouse on 29<sup>th</sup> Jan- 4<sup>th</sup> Feb 2011. This was a ludic interface, which engages with the idea of adult play, made from paper and exhibited in a gallery. I note this here because I think that there are synergies between the low-fi traditional form of the toy theatre and the digital, but I do not include the project in this thesis, as it is not relevant as a research method.

The roles that Paul Sermon and myself undertake collaboratively can be clearly defined. Paul Sermon's work focuses on embodiment and on how communities can be connected through networked space through "telematics", using Bluescreen technologies to bring remote locations and audiences together on screen. My research has focused on developing interactive environments, looking at the ludic interface, exploring play and how this can encourage interaction in public locations potentially changing the way that we engage with each other in urban space, promoting civic responsibility and tolerance. I develop the animations, the digital virtual environments and props. For some of the works such as "All the world's a Screen" and "Urban Intersections" Paul Sermon and myself built physical sets or environments in "Second Life" or "OpenSim" together. Through drawing I am interested in subverting the perfection of the digital and playing with optical illusion and anamorphic environments such as the set for "Urban Picnic", which comprises of a flat backdrop of a garden, with three-dimensional tables placed on top. When filmed this two-dimensional space appears to be a three dimensional environment, with the two locations mapped together by Paul Sermon. There are benefits in working collaboratively with Paul Sermon, for the purposes of my research question around community engagement, as his approach brings another dimension to the work, mixing communities on screen. In my solo works such as "Ludic Second Life" (Gould, C.2009), "The People You're Not"(Gould, C. 2011) and "Urban Intersections" (Gould, C. 2009) I focus on ludic play and interaction with an audience in the urban environment and not on the telematic merging of mixed environments and audiences.

Through the documentation of my practice using lineout videos, documentary video and photographs, as well as open ended and structured interviews; I have gathered data to inform my research practice. The outcome of each artwork has lead to further investigations and through the development of reflective practice, I have tested theories and reviewed literature. Each project has informed the next and the methods that I have applied have enabled me to test the conceptual framework on open and closed systems. I have used my findings to develop a series of interview questions, which I have used as a research method but I have found to be limiting and off-putting to the audience. My preferred method is data mapping from the lineout videos of the installations, which capture the image that participants see on screen complete with real-time interactions, gestures and movements, and these have proved to be a rich source of data.

The works that I have completed have informed the theoretical framework which I applied in order to move into the final phase of development of my PhD for which I developed two new artworks for large urban screens, “Occupy the Screen” (Gould C. Sermon P. 2014) <http://www.connectingcities.net/project/occupy-screen> which was shown as part of the Wedding-Moabit Festival for the Connected Cities EU consortium and “Screen Test” (Gould C. Sermon P. 2014) for the “Staro Riga” City of Culture 2014.

<http://www.staroriga.lv/013/en/russian-путеводитель-по-staro-riga-2014/>

My literature review is informed by a timeline (*see fig.47*), a method that I developed to frame my literature review, looking at political, economic, scientific, philosophical and cultural events that have impacted on the developments of public art, the urban screen and its cultural application. As part of my research I worked with a number of big screen curators and researched big screen curation, ownership and management, undertaking informal interviews with former curators of the BBC Urban Screens.

Through my research I explore the importance of play and the emergence of interactive artistic practice and how this can be used to engage the public. I investigate the role that the artist can play in offering agency and co-authorship to participants and have involved public audiences in different ways with the co-production of artwork, dependent on the project. For “Occupy the Screen” workshops were held with local migrant communities to develop ideas for the landmarks and objects that would feature as part of the environment. They were asked to recount their experience and perception of the city and their ideas were captured and implemented as part of the design. As part of “All The World’s a Screen” “The Seven Ages of Man” was presented between the Museum of Contemporary Art Barcelona study centre (MACBA) and UMBRO Design Centre in Manchester to test environments and props to inform the final presentation of the work three weeks later. As part of this project development I worked with a group of MA students from the Interactive Design Course at Pompeu Fabra University, Barcelona as well as with the general public. The focus was on optimising opportunities for the audience to co-create within a given framework. The final exhibition involved Hangar Artist Studios, a creative arts and media exhibition space in Barcelona with participants at MadLab, a community arts and science lab in Manchester’s Northern Quarter who collaborated to prepare props and characters before the event. Each installation involves live co-collaboration with audiences, so that the final work remains incomplete without the participation of the public and during the presentation of the work I make changes to the environments in response to the audience.

## 1.4 Data Gathering

The interactive installation works that I have produced are both open and closed systems and offer varying opportunities for play. My preferred methodology ensures audience autonomy and freedom to respond in an individual way. I have a reflective blog to document my practice <http://urbanscreensalford.tumblr.com> but also work in sketchbooks and notebooks following Candy's model of "*creating > reflecting > creating again > investigating > creating again*". (Candy, L. 2011p45) In this way my practice-based research is informed by reflection and further investigation, maintaining a balance between practice, reflection on work and thesis development.

Through the development of interactive artworks I have developed a "creative production based study", where each project has developed from questions raised and observations noted through my on-going investigations. (Scrivener, S. 2004 p4) I have produced evaluations from direct observation, monitoring and recording audience response from lineout videos as well as analysis of video documentation, interviews and papers.

I have devised a research framework based on Hans Scheuerl's "Criteria for Games" (Scheuerl, H. 1965 p607) to explore the qualities of open and closed interactive artworks, looking at "ambivalence" (movement between rule and chance) to "freedom of choice", "virtuality" (separate from real life and the self), to "infinite" with no preconceived ending. I have developed this framework into a data map to document open and closed play in interactive systems and this has also informed the development of a questionnaire.

My preferred research methodology involves observing the audience in action in order to capture unsolicited audience responses as well as to avoid impacting on the data collected and this is in keeping with my research question, which focuses on offering audience autonomy. This is backed up by further research by Costello who found unobtrusive methods of framing questionnaires to be the most effective, resulting in more varied responses and lengthier answers. (Costello, B. 2011 p190) I have used data from lineout videos to gather audience response to avoid interference with data collection through "distraction, disengagement or intimidation" and this method does not interfere with the audience whilst they are engaging with the artwork. (Costello, B. 2011 p188-9) Michel de

Certeau explores the way that the public re-appropriates culture imposed on them by institutions encapsulated in his term “user tactics”, and I have applied this approach to my own research. (Certeau M. 1984) I observe the intended and actual use of the installation or methods of engaging and I am particularly interested in unexpected engagement with the artwork, as this offers a measure of the levels of “freedom” in terms of “closed-ness of the game” and opportunity for autonomy represented by “infinitude”. An audience led approach through observation is appropriate therefore, requiring minimal levels of interference with the participants.

Initially I wanted to avoid formal questionnaires but decided to test this as a method so I developed a questionnaire part way through the PhD study in response to research methods undertaken. I found that an interviewer present at the installations inhibited the audience, and discouraged them from taking part, which impacted negatively on my preferred method of observation. The evidence gathered from observing audience interaction from lineout videos, helped to inform the “Open-Closed Data Framework” (*see 6.4*), which in turn informed my questions. It was important to me that the research findings were audience led, particularly as my PhD question revolves around the notion of audience autonomy and self-representation. For the final piece, “Screen Test” I did not use questionnaires, because I had found them very limiting for the “Occupy the Screen” project, I was also not permitted to use interviews for this work, and this was written into the contract. I have employed a number of data evaluation methods using qualitative analysis in order to record audience responses and subsequent questions that arose, in addition to the “Open/Closed framework” data map, in which I mapped both existing artworks and my own research methods where I recorded the audience response from the time code of the line out videos, I also produced a Venn Diagram of Open/Closed systems. (*See 6.6*)

Through my practice based methodology I aimed to engage with a broad demographic of people and as the majority of urban screens are located in a busy shopping centre, this location attracted a diverse audience, those who were passing by as part of their everyday lives as well as interested parties and possibly media specialists attracted by the marketing of the event. Where I have not always had access to a large urban screen I have exhibited work in alternative community and cultural locations as well as in galleries. This provides a placebo effect as it allows me to compare data, engagement with the work and to test

how the environment can influence the audience participation, but also to analyse the impact of the large urban screens on the work. Informed by Michel de Certeau, I identify “user tactics” employed through engagement of the public artwork, through which I can measure unexpected ways of engaging with the work, and the individual narratives that unfold in order to identify the openness of the work. (Certeau M. 1984)

Further peer review of my work has taken place through the dissemination of my research at conferences, with published peer reviewed papers, book chapters and proceedings from conferences as well as presentations. Comments and feedback have been received and documented as part of this process. The feedback that can be gained from this specialist audience is very beneficial and the value of this is supported by research undertaken by Brigid Costello who found that it is important to select audiences in order to get the most effective results. She promotes use of social couples to engage with an artwork in order to inspire confidence in each other as well as experienced media artists, or peers, to benefit from their expertise. (Costello, B. 2011 p189) Through my observation I have found that the inclusion of specific social groups whether from a conference or artist network, can have a positive impact on the dynamic of the general public also taking part, as this can inspire confidence.

Each time that I have presented a public artwork I have produced a risk assessment form, and as part of the PhD requirement I have also submitted an ethics approval form, which has been approved by the University of Salford Ethical Approval Committee. My approach involves informed consent; there are signs that inform the public that the urban screen installations are being filmed and that entry into the designated filming area will result in the subject’s participation in the artwork, with guardian consent forms for minors. By stepping into the film capture area the participant agrees to contribute to the public artwork and to have their image and performance captured on film and available online.

Through my literature review, in chapter two and three, I explore the emergence of the city, changing culture and technology and how this impacts on culture and early media artworks. In chapter four I present eight urban screens installations, examining my research findings with data analysis and reflection.

## 2. Urban Screens

### 2.1 Networked Cities

Our cities are networked; the screen allows the constant transmission of the latest information and communication. We are connected to a global digital infrastructure with mobile devices, GPS and Internet. Observed by surveillance cameras, our personal data can be stored and tracked, as can our geographical movements. Urban screens take many formats to include large urban screens, hand held devices, architectural facades, they can be DIY, temporary, or part of the permanent architecture of the city. Urban screens have been used to relay news, information sport and advertising, as well as cultural events and transmit 24 hours a day across cities globally. Through my research I look at how artists can harness this digital network to enrich experience and build connected communities focusing on large urban screens.

Today's media cities are made up of many communities, which are multicultural, multilingual, and multi-faith, a multiple of strangers are brought together at close proximity. Richard Sennett sites Aristotle as the first to identify the city as a "synoikismos" or made up of diverse tribes and identifies contemporary cities as sharing a similarly tribal composition, highlighting the importance of respect for these cultural complexities. (Sennett, R. 2013, p4) Guy Debord proposes, in contrast, that the development of a global economy threatens to reduce the distinctive culture of our cities. (Debord, G. 1995) Saskia Sassen however, suggests that as we experience homogeneousness of space there arise new possibilities of "placeness", introducing the notion of the "global slum", which "enables the possibility of complexity". (Sassen, 2009) This idea of multiplicity as beneficial to a community adding to the cultural richness, was shared by Georg Simmel a century earlier, in his 1903 essay on the city where he identified the demographics of a cultural mix as more enriching than the small close-knit communities of "Gemeinschaft". (Sennett, 2013, p38) Richard Sennett suggests that contemporary society necessarily involves flux and shift in demographics. (Sennett, R. 2013 p4) This is supported by Lucy Lippard who defines our relationship to place as richly layered through time and through different cultural perspectives and power relations, a hybrid layer of experiences. She notes that the history of place can be represented by the more powerful communities such as that of Northern America, which has been documented historically from a white Christian

perspective. (Lippard L. R. 1997 p9) Through my research I explore the role that digital artists can play in developing participatory art, to engage with the urban environment, allowing for a multitude of voices and celebrating cultural distinctiveness and diversity, creating new narratives and establishing new legacies, through the public accounts, stories and memories that emerge. Scott McQuire proposes that artistic practice and research can potentially change and enhance the way that we experience the urban environment and the way that we relate to each other. (McQuire, S. 2008) Through my research I have produced a data map charting the development of the city from industrialization to the media city in relation to the advancement of technology, philosophy, economics, politics, popular culture, media and artistic creative practice and the resonance between these factors. In the next chapters I look at the effect that the new cities have upon the psychological and cultural development of the city, challenging attitudes and expectations around how the urban space was inhabited and experienced.

## 2.2 The Citizen of the new Metropolis

The new crowds in the fast expanding industrial cities from the mid-nineteenth century were described as “*a large amorphous terrifying mass*”, an “*unknowable multitude*”. (Gilloch, G. 1997, p140) Walter Benjamin studies the rise of the new cities through the experience of its inhabitants, and does this through the literature of the 1850s, identifying the city as both terrifying and enticing. He cites a poem by Hugo “*La Pentre de la Reverie*” “*Crowd without name! Chaos! [O]f voices of eyes, of footsteps. Those that one has never seen, those one doesn't know. All the living.*” (Benjamin W. 1987 p62) Engels also referred to the new cities in “*The Condition of the Working Classes in England*” (Engels, F. 1844) in which he derides the crowd “*they crowd one by another as though they had nothing in common, nothing to do with one another, and their only agreement is the tacit one, that each keep to their own side of the pavement...while it occurs to no man to honour another with so much as a glance. The brutal indifference, the unfeeling isolation of each in his private interest, becomes more repellent and offensive, the more these individuals are crowded together, within a limited space.*” (In Benjamin, W. 1987, p 69) Simmel further reaffirms this sense of isolation in the city, “*before the development of buses, railways and trams in the nineteenth century, people had never been in a position of having to look at one another for long minutes or even hours without speaking to one another*”. (Benjamin, W. 1987, p38) Simmel referred to the increased levels of stimulation

in the metropolis, identifying a sensory overload in his 1903 essay, “The Metropolis and Mental Life”.

*“The psychological basis of the metropolitan type of individuality consists in the intensification of nervous stimulation which results from the swift and uninterrupted change of outer and inner stimuli...Lasting impressions, impressions which differ only slightly from one another, impressions which take a regular and habitual course and show regular and habitual contrast- all these use up, so to speak, less consciousness than does the rapid crowding of changing images, the sharp discontinuity of a single glance, and the unexpectedness of onrushing impressions. These are the psychological conditions which the metropolis creates.”(Simmel, G. 1903 p11-12)*

The rhythm of the city, then, contrasted sharply with that of the village, and Simmel introduced the idea of “stranger shock”, that the urbanite wears a protective mask. Simmel identified along with the movement from the rural to the city, a shift in social engagement from a position of active enjoyment in the company of others “*Geselligkeit*” to acceptance of others as strangers “*sociality*”.

*“Packed densely together with strangers, seeing but not speaking to them, masked modern man has taken a journey in the city from the difference universal, sociable pleasures of *Geselligkeit* [pleasure of the company of others] to a subjective condition Simmel called “sociality” this he defines as acceptance of the other as stranger rather than any acknowledgement of solidarity”.* (Sennett, R. 2013, p38)

Benjamin attributes the fear of the anonymous crowd as inspiration for the birth of the detective story and he references the works of Edgar Allan Poe and Arthur Conan Doyle. The detective story became a genre that helped to quell fears and distrust of the many strangers by which people found themselves surrounded, but also as a means of making sense of this new world, with mass production and the growth of the middle class, society became vastly more multifaceted and people relied on semiotics to make sense of each other, looking to visible signs, through clothes, accent and body language and in that way, Benjamin argues, playing detective.

“Baudelaire’s “*flâneur*” in contrast was the embodiment of a new modern man who embraced the new crowds. The “*flâneur*”, (or stroller), was a gentleman of leisure who

promenaded the streets, without purpose, taking in the sights and the spectacle of the new city, ambling contentedly observing the crowd, perusing the window displays. At one point it had been a fashion for the flâneur to take a tortoise for a walk, in order to set the pace, illustrating just how leisurely his preamble aimed to be. The flâneur has been described as a prelude to the window shopper. (McQuire, S. 2008) Gilloch notes a duality in the attitude to the crowd in the literature of the time, *“Fear loathing, contempt, but also excitement and jubilation in various measures and admixtures, these characterised the literature of the crowd in the epoch of it’s birth”* (Gilloch G. 1996 p 142) Gilloch further highlights the potential of the crowd for anonymity, and hence, freedom from convention or conversely an escape from justice, portraying a liberating, yet ominous presence within the crowd *“In the crowd the modern individual could loose himself, could disappear without trace. The crowd becomes the hiding place of modernity, the haunt of the bohemian and the fugitive.”* (Gilloch, G. 1996, p142)

The excitement of the crowd is reflected in Baudelaire’s Painter of Everyday Life when the character Constantine Guy exclaimed, *“Who can yet be bored in the heart of the multitude, is a blockhead! A blockhead! And I despise him!”* (Baudelaire, 1986 p9) Baudelaire drew his inspiration from the new frenetic urban life and described the ecstasy as well as shock of the new cities, attributing the city with the powers of a life source, *“the lover of universal life enters into the crowd as if it were an immense reservoir of electric energy”*. (Baudelaire C. 1986, p9)

The analogy to electricity is apt as Benjamin identifies shock as being the cornerstone of modernity and that Baudelaire placed shock at the centre of his work. (Benjamin, W. 1973, p117) Gilloch describes this sense of shock and heightened stimulus in the new city *“Jostled, pushed and shoved by the seething urban crowd, the city dweller must remain vigilant constantly on guard and alert. In the midst of the crowd the individual is bombarded by a plethora of inassimilable stimuli. The city is the site of the inundation and overwhelming of the individual by sudden, unexpected, diverse sense-impressions... Experience is no longer a continuous development but is reduced instead to a seemingly random series of half impressions, of images and thoughts only half registered, still less understood.”* (Gilloch G. 1996, p 143)

Jonathan Crary suggests that this fragmented representation of the world was reflected in the emerging art and popular culture of the period. At the same time, the new technologies of photography and film contributed to this assault on the senses and further impacted on our experience and notions of the city but also on our perception, attention and presence within the world. (Crary J. 1999) A letter from Freud to his family written in 1907 illustrates this change as an early example of an urban screen experience, in a piazza in Rome where a temporary screen showed advertising stills punctuated by short bursts of moving image. Freud identifies a state where he is at once transfixed by the repetition of imagery and after a time isolated from the crowd. Jonathan Crary suggests that the early urban screens brought about a sensory shift in the very perception and of the materiality of the city, fading walls into ephemeral dreamlike spaces. *“The dematerialisation of architectural surfaces into projection screens demonstrates the reversibility of what has been established figure/ ground relations within an urban fabric, and the screens on these Roman rooftops effectively displaces the built city to a oblivion of a cognitive periphery. The blurring of coherent monumental landmarks is evident in Freud’s own doubts about his representation of the plaza (he was not sure if he had forgotten a fountain)...”* (Crary J. 1999, p366-367) Crary suggests that this use of media in the urban environment is changed our very perception and memory of space.

In the next chapter I look at how technology mediates our experience in the urban environment, starting with early forms immersive environments, their relationship to media, art and to popular culture and the subsequent impact on intercultural exchange through the emergence of the global village. (McLuhan 1962)

## 2.3 The Emergence of Media and Popular Culture

Erkki Huhtamo identifies the moving panorama as representing the beginning of media culture and similarly aligns this development in Western culture with the *“onslaught of capitalism, imperialism, urbanism, and, in the long run, the emerging era of the masses.”* (Huhtamo, E. 2013, p5)

Inspired by a keen interest in travel and globalism, panoramas were used by urbanites to transport to the country, or across the globe, empowering those without the financial means to access landscapes and environments from which they would be otherwise excluded. In 1787 Robert Baker took out a patent for “nature at a glance” a painted life size panorama, (a wide-angled representation of a space) this was an environment in which the public could immerse themselves. Panoramas had been used in China for centuries but became very popular in Europe at this time, often depicting far away places, which reflected the growing interest in travel and the exotic. Dioramas also became very popular, these are small-scale representations of an environment, often using lights and multiple screens, and housed in purpose built structures, such as Daguerre’s Diorama in Rue Samson, a “Sight Travel Machine” (July 1822) in which a turning platform moved the viewer through various landscapes. Both panoramas and dioramas focused on the representation of space enabling far away places to become accessible. Huhtamo identifies panoramas as the emergence of a media form, and of mediated reality. *“The panorama may have been introduced as a new art form but it was conceived to create a market for mediated realities and seemingly emancipated gazes. As such it was an early manifestation of media culture in the making, although it was not wired in the sense of broadcasting or the internet, it was capable of teleporting it’s audience to another location and distorting the boundary between local existence and global vision.”* (Huhtamo, E. 2013, p5) Benjamin also makes reference to teleportation and identifies a change in our relationship to place and time by presenting the panorama as a meeting of technology and art to forge a link back to the countryside from the emerging cities. *“The city attempts to bring the countryside into the town. In panoramas the city opens out to the landscape as it will do in subtler fashion for the flaneur.”* (Benjamin, W. 1936, p99)

Often the moving panoramas were transported from urban to rural areas, and Huhtamo suggests that they did not represent one form or topoi, moving panoramas were more closely related to forms of street performance and popular culture, scenery and folk art rather than high art and for this reason he believes they have been overlooked by historians. Documentation that exists tends to be in the form of historical accounts by showmen. (Huhtamo, E. 2013, p11) The scenes were generally painted with economic considerations in mind, so some areas of the paintings were sparse with only selected detailed areas, and were usually non-figurative. The moving panorama tended to focus on geography and spectacle, often with a narrator, less as immersive environments and more

as the spectacle, a backdrop for the showmen. They came from a long tradition of “ambulatory entertainment” (Huhtamo, E. 2013, p11) and operated often at traveling fairs alongside the theatre troupes, wax and dime museums, automata and magic lantern shows. Other early media forms share this focus on illusion and magic and association with the fairground, and co-inside with an era in which dabbling in mysticism and spiritualism was popular. Some early technologies also became associated with the theatre such as “Peppers Ghost”, invented by Professor John Henry Pepper and engineer Henry Dicks; it was introduced into theatres in the 1860s, and premiered in 1863 in Charles Dickens’s “The Haunted Man”. Another early media form, conjuring illusion and magic, was August Fuhrmann’s “Kaiserpanorama” (1881), using the popular term to draw in the crowds this was not really a panorama but a huge scale stereoscope with augmented reality effects using lighting and transparent paintings to create three-dimensional scenes. This became a profitable business and Fuhrmann produced two hundred and fifty Kaiserpanoramas across Germany and with twenty-five spectators each equip with coin slots, representing, ‘one of the numerous sites on which we can credibly locate an “industrialization” of visual consumption’. (Crary, J. 1999, p138)

Huhtamo suggests that a proactive, dynamic relationship existed between audience, location and panorama. Moving panorama performances changed in response to place and audience and this he identifies as “transformative”, connecting communities and bringing the global and local together.

*“All moving parameters were not emphatically urban products and all spectators did not receive them in uniform ways. Their performances became sites where social attitudes and cultural identities were negotiable.” (Huhtamo, E. 2013, p11)*

From this perspective there was a dialogical aspect to the moving panoramas involving interchange between participants which Huhtamo suggest impacts on public interrelationships, in the form of a dynamic exchange. Huhtamo further documents the proactive nature of the audience at this time, highlighting the popular market in miniature panoramas, which emerged, where the audience became the designer and performer, playing either with purchased ready-mades, or inventing their own narratives. This proactive relationship is also evident in the early films of Mitchell and Kenyon where participants performed to the camera in the knowledge that they could watch themselves two days later in the local fairground as advertised.

It is the active relationship between artist/designer and audience which is key to this thesis and through this study I explore media and art forms which afford the participants a more proactive role, than that of mere passive consumers of a mass produced, monolithic culture, as presented by Adorno and Horkeimer. They used the example of the telephone and radio to demonstrate the increased docility that media forms progressively afforded an audience at the beginning of the twentieth century, the invention of the radio, unlike it's precursor the telephone, no longer allowed the listener to speak, turning the dynamic "subject" into a passive "listener". Adorno and Horkeimer argue that this is legitimised by the concept of "industry" and "professionalism", and those outside that structure are denigrated as "amateurs". (Adorno T. and Horkeimer first published 1947 p95)

This is further supported through Guy Debord's definition of "spectacular culture" where the audience are passive consumers of news, advertising, and culture, which exist to reaffirm the prevailing social order. *"By means of the spectacle the ruling order discourses endlessly upon itself in an uninterrupted monologue of self praise. The spectacle is the self portrait of power in the age of power totalitarian rule..."* (Debord, G. 1995, p19) Debord presents the "spectacle as a "monologue", a one-way conversation, a passive consumption of images.

Jacques Rancière explores the nature of the spectator in the theatre and notes that Plato suggested that, *"The theatre is the place where ignoramuses were invited to see suffering"*. (Rancière, J. 2011, p3) This focuses again on the idea of audiences as passive observers and Rancière proposes that we strive for a different type of theatre: *"a theatre where the passive optical relationship implied by the very term is subjected to a different relationship- that implied by another word, one that refers to what is produced on the stage: drama!"* (Rancière, J. 2011, p7)

He suggests that two approaches are required in order to achieve this, firstly:

*"The spectator must be roused from the stupefaction of spectators enthralled by appearances and won over by the empathy that makes them identify with the characters on stage"* and secondly that the audience will be shown *"a mystery whose meaning he must seek out. He will thus be compelled to change the position of passive spectator to that of scientific investigator or experimenter, who observes phenomenon and searches for their causes"*. (Rancière, J. 2011, p7) From this position there are two requirements that the

audience has a sense of “empathy” and that they are actively engaged as “investigator” or “experimenter”, the former involves facilitating audiences to see the work from the perspective of the “other”. The later involves a proactive role on the part of audience to engage with the unfolding narrative.

I explore the idea of active audience participation later in the thesis and through the development of my creative practice. In the next section I will look at early artist practice that focused on the proactive role of the audience in art practice.

## 2.4 The death of the Author

Developments in technology, science and philosophy impacted on artistic practice and during the twentieth century there was a movement away from the notion of art as object towards a conceptual ephemeral form. This, Lucy Lippard suggests, took the focus away from the object as a commodity, but also through the development of technology ordinary people had much more access to the formal practices of making artworks. (Lippard, L. 1997) Walter Benjamin argued that the photograph had lost the aura of the traditional work of art, brought about by mechanical reproduction. He suggested, however that developments in technology would lead to a wider appreciation and democratisation of art. (Benjamin, W. 1936) Rodchenko saw the camera as the most egalitarian art form because it was accessible and was not imbued with the capitalist symbolism of the object as commodity. *“He saw photography as aesthetic Communism, a tool for the redistribution not of wealth, but of art, a way of making pictures available to all.”* (Dixon, A. G. 2008) From this perspective the invention of photography has a democratising effect on creativity.

In addition to greater access to formal processes of image making, artists became more aware of the role that the audience played in the experience of reading and interpreting artwork. Jonathan Crary suggests that the early experiments by the Impressionists, Cubists and Futurist with perception, space, light and sound acknowledged an active role that the audience would play in the experience of the artwork. (Crary, J. 1999) This concept was highlighted by philosopher John Dewey in a series of lectures ‘Art as Experience’ (Dewey,

J. 1934) where he underlined the audience's role in the interpretation of meaning in art. Duchamp pursued this idea further and stated "*The creative act is not performed by the artist alone; the spectator brings the work in contact with the external world...and thus his contribution to the creative act.*" (Kupes, G. 1960 p111-112) This was reaffirmed by Barthes assertion that the work of art is a dual process between writer and reader, involving interpretation. "*We know that to restore writing to it's future, we must reverse it's myth: the birth of the reader must be ransomed by the death of the author.*" (Barthes, R. 1977 p142-148) The concentration here is on the relationship between the artist, the environment and the audience and the interplay that takes place.

This represents a huge leap from the renaissance philosophy of one worldview, truth and divine right, and Paul Virilio identified that Einstein's theory of relativity (1907) "more or less destroyed anything connected with external truths". (Virilio, P. 1994 p22) Henri Lefevre outlines the transformation that was taking place at the beginning of the twentieth century and identifies the period from 1910 as a time where all that was taken for granted in the classical world became shifted as developments in technology, philosophy, science, engineering and mass production, had a profound impact on our understanding and experience. The very structure of the city had changed, expanding the way that we inhabit the world vertically into the sky and channelling deep below the earth with high-rise buildings reaching skyward and trams tunnelling underground.

*"The fact is around 1910 a certain space was shattered. It was the space of common sense, of knowledge (savoir), of social practice, of political power, a space hitherto enshrined in everyday discourse just as in abstract thought, as the environment of and channel for communications; the space too of classical perspective and geometry, developed from the Renaissance onwards on the basis of Greek tradition (Euclid, logic) and bodies forth in Western art and philosophy, as in the form of the city and the town."* (Lefevre H. 1991, p25)

This view is echoed by Marshall McLuhan who identified developments in technology as changing every aspect of our lives, as the new technology became an extension of ourselves. (McLuhan, M. 1967) The new philosophies impacted on our interpretation of art, the avant-garde questioned the very institution of art, and movements such as Futurism and Dada took their work out of the gallery and into the streets, rejecting the authority of

the art establishment and the institutions in which art was presented and questioned the very fabric of what constitutes an artwork. Futurist artist Luggio Russolo explored sound, manipulating the senses through cataloguing the sound types brought about through industrialisation using the street as his instrument. The Surrealists were very interested in the street as a creative starting point, and in-particularly in Paris. Surrealist poet Louis Aragon celebrated the urban environment as having “the wonderful sense of the everyday”. (Crary, J. 1999)

Söke Dinkla identifies a movement away from the traditional gallery setting from the early twentieth century and at the same time a development of interaction within artistic practice from the object as art towards performance and interactivity as a prelude to media art. From this perspective the move away from the institution of the gallery and the interest in artist and audience interaction went hand in hand, and she suggests that this shift towards public engagement was liberating and democratising. (Dinkla, S. 1996 p279) Art works also moved from the gallery to the theatre exploring active interaction between artist and viewer through typography, performance and sound. Filippo Tommaso Marinetti in the manifesto “Variety Theatre” promoted the idea of an active audience, associating negative attributes to passivity:

*“The Variety Theatre is alone in seeking audience’s collaboration. It doesn’t remain static like a stupid voyeur, but joins noisily in the action, in the singing, accompanying the orchestra, communicating with the actors in bizarre dialogues.”* (Marinetti, 1913)

Dadaist explored the notion of cause and effect through their performance pieces, which could be seen as an early form of interactive art. The Futurists aimed to evoke shock and disgust from their audiences, and David Burliuk, Alexander Kruchenykh, Vladimir Mayakovsky, Victor Khlebnikov published their manifesto “*Slap in the Face of Public Taste*” (1917) describing horror and insurmountable hatred at “*the filthy stigmas of your ‘common sense’ and ‘good taste’ ...*”

<https://nihilsentimentalgia09.files.wordpress.com/2013/03/modernist-manifesto.pdf>

Max Ernst explored the concept of cause and effect in his first exhibition on May 2 1921 (which he was prevented from attending by the occupying forces in Cologne). The Dadaists supported the event, Jacques Rigaut counted cars and pearls in a loud voice,

visitors were greeted with insults, and strange noises, ridiculous phrases and flashing lights which all came from a cupboard. Louis Aragon impersonated a kangaroo, Andre Breton ate matches, Phillipe Soupault played hide and seek with Tristan Tzara, Benjamin Peret and Serge Charchoune shook hands for an hour and a half.

Max Ernst left an axe next to his work in the second Dada exhibition at the Bauhaus for use by visitors who did not like his work and another piece within the exhibition invited audiences to insert comment, Dadaist, or not. In 1938 Marcel Duchamp created a piece for the “*Exposition Internationale du Surrealism*” that was designed to light up when audiences approached, triggered by a light sensor. This unfortunately did not work but lamps were initially provided (until they were eventually stolen).

Lucy Lippard identifies an accelerated move during the fifties and sixties away from the fetishisation of the object and the “dematerialisation of the art object” (Lippard L.1997), towards audience participation, interaction and performance from the Situationist movement, to Fluxus, which often took place on a stage like venue and Happenings events, taking art exhibits out of the traditional gallery and into the streets, with a sense of theatre and an interplay between audience and performer. Allan Kaprow defined Happenings as:

*“environment-like, non theatrical exhibitions that turned to the public in an increased degree”.*

He aimed for “*the line between art and life as fluid and perhaps as indistinct as possible*” through “Happening” events, which took place in the everyday environment and were open to improvisation. (Shanken E. and Stiles K. 2011) Edward Shanken and Kristine Stiles warn of the risks that this can trigger, they cite an event where one of the performers, when injured was ignored by the audience who thought the accident part of the act. They argue that Kaprow himself rejected the “Happenings” movement after ten years as he said that audiences were not ready for the creative act of co-creating artworks.

Examples of artworks developed for exhibition in the street include an early street action, “From the Underdog Pile” by Valie Export (1969) which involved the artist walking her partner Peter Wiebel on a lead in a move to subvert traditional gender roles. Street interventions include Haas & Hahn Favela painting, Vila Cruzeiro (2006) where ornate patterned murals have made a notorious slum area in Rio de Janeiro a tourist attraction.

The artist EVOL turn concrete street furniture, gas meters etc. into small-scale blocks of flats using multiple stenciled layers. (Plattenbauten, Clamartpark. GrapengieBer, 2009)

Other artistic practice has focused on the concept, quite literally on the voice of the audience. Grant Kester uses the term “dialectic art” (Kester, G. 2004) to describe interventionist artworks that involve conversation with the local community, civil servants, police officers and local government employees. He highlights the importance of role-play, of stepping outside the self but also of the ability to develop listening skills. Suzanne Lacy has developed a number of dialectic artworks aiming to bring about transformation in communities including *“Between the Door and the Street”* (Lacy, S. 2013) where hundreds of women were involved in discussions on the stoops of the houses with conversations ranging from gender, race ethnicity and class. Five months of preparation involved expert guidance from a number of activist groups. The conversations were unscripted but choreographed and passed between groups as a series of questions on a street in Brooklyn with 2,500 participants who reflected the diverse local community. *“I believe the sharing of certain social experiences opens a window,”* Ms Lacy said. *“If you put society — the audience — in the position of listening, they are going to start reframing their ideas.”* (Lacy, S. 2013)

An urban screen approach to sharing community ideas around issues significant to the community includes Moritz Behrens and Nina Valkanova work “Smart Citizen Sentiment Dashboard” (Behrens M. Valkanova, N. 2014) exhibited as part of the “Staro Riga 2014” festival and celebrating Latvian independence. Participants could swipe their “e-taloni”, Riga’s transport card, over a happy or sad smiley to share views with others in the city on environment, public transport, development, security and culture, this was projected on to the façade of a building. The Riga public selected the issues to be considered, through participation in the development of the piece.

Works that engage with the architecture of the buildings include projection mapping and both Riga and Paris have a festival of light focused on this medium. “Urban Screens” have commissioned a number of projection-mapping works on buildings including Daniel Rossa’s “555 Kubic” (Rossa, D. 2009), at Galerie de Gegenwart, Berlin. The concept was to explore perceptions of dimensions and geometry through a series of motion graphic interfaces, inspired by the building itself, using references to the design and to architectural drawings. Another urban screen projection-mapping project was “Jump” (B Boys, Tobo,

2013) collaboration between artists the B-boys and Tobo from “New Circus” where the performers display impossible acrobatic leaps and moves turning the building façade into a “parcours” display. Both pieces were designed as a spectacle with no interaction, the focus on turning the building from object to subject, and amazing the audience with motion graphics and visual trickery.

DIY projections include Mischa Kuball “Mega Sign No. 1 at the Mannesmann Office Tower” (1990), using the building as interface, where there was a nocturnal display of lights, which were left on in the building to representing visible symbols. Giselle Beiguelman’s “Poetica” (2003), is a series of visual poems written in non-phonetic fonts, dingbats and system characters displayed as DVDS, digital prints and movie trailers.

The urban screen is becoming part of the fabric of state of the art urban architecture, integrated into the infrastructure of buildings. Potentially virtual networks and data flows can be harnessed as a form of social exchange, measuring human activity, and visualising networks, connections and information in social space, promoting a shared social responsibility and collective activity. In the next chapter I look at public engagement, play and engaging with communities, through interactive artworks.

### 3 Public Engagement

#### 3.1 Public Audiences

Richard Sennett promotes the idea that sociability and public engagement need to be actively worked upon, and do not happen automatically. In a multicultural society, difference defines us and Sennett proposes that the aim should be a sociability that embraces tolerance as opposed to attempts to achieve consensus. In a contemporary society in which religion and material production play a reduced role in everyday life, Sennett advocates craft and ritual as well as informal discussion and social groupings as potential methods to bring people together as a support network, promoting empathy and tolerance as opposed to sympathy and condescension. Sennett promotes the idea of engaging beyond the divisive “us” and “them” attitude of a society defined by difference towards a “skilled co-operation” working together through craft skills. (Sennett, R. 2013 p4)

He highlights the importance of all participants taking an active role in forging institutions or community groups as opposed to an impinged “top down” approach. “...*when ritual turns into spectacle something happens to communities and to individuals. Spectacle turns community into a hierarchy in which those at the bottom observe and serve but do not participate as individuals with self-standing worth.*” (Sennett, R. 2013 p108)

Here Sennett reaffirms the notion of the passive audience engaged in the spectacle, and promotes the idea that proactive engagement within culture is empowering. This idea of a community identity as subjective and requiring a proactive approach is reaffirmed by Anthony Cohen who identifies community as “*not a matter of objective assessment but it is a matter of seeing, a matter which resides in the minds of the members themselves.*” (Cohen A. 1985, p20)

The image of a contemporary city as increasingly characterised by marginalisation and isolation is reflected in Robert Putman’s study on social cohesion. (Putman R. 2001) He found that people keep away from those who are different, and that passive participation now marks civic society. George Simmel had identified the inhabitants of the city of the early twentieth century as suffering from “stranger shock” (Simmel, G. 1903) that movement into the big cities represented a shift away from “*geselligkeit*” (a universal

pleasure in pursuing the company of others), towards “sociality”, which represented an acceptance of strangers as opposed to a sense of comradeship, about which he was optimistic. Conversely he identified small intimate communities, such as those of immigrants as “*germeinschaft*” as being blinkered and inward looking. Simmel celebrated difference of the urban crowd and believed that this was more enriching than the small segregated, close-knit communities of “*Germeinschaft*”. (Sennett, 2013, p38)

Arguably the social, ideological and economic impact of the development of communities and public life within the new cities, as well as the onslaught of the first and second world wars impacted on the early history of modernist art. Grant H. Kester identifies the modernist period as introducing a self-imposed divide between the audience and artist. At the turn of the century the desire of the avant-garde artists to embrace the new, to identify with revolutionary ideas, the break in the link between artist and aristocratic patronage as well as the rise in commercial advertising and consumerism drove the artist to sever the links between the audience and artist. Modernist art aimed to “*challenge rather than corroborate...the survival of authentic art seemed to require that this [previously] potentially stultifying interdependence of artist and viewer be severed through shock, attack and dislocation.*” (Kester, G. 2004 p26)

The mid-twentieth century, post-war early modernist critics promoted the avoidance of representation, as this was seen as liberating an audience, avoiding dogma and allowing freedom of interpretation. Peter Watson identifies the post war recovery period as a time where many artists were refugees of the war and influenced by psychology, turned inwards to focus on the individual rather than community, particularly in New York, which became the epicentre of abstract expressionism. (Watson P. 2000) Art theorist such Clive Bell promoted a focus on “significant form”, (Bell, C. 1958) on process and on the aesthetic. Roger Fry on the idea of an authentic art, which the general public find inaccessible and threatening to their worldview. (Fry R. 1912 p28-29)

David Wellbery suggests that through the aesthetic the viewer transcend to a higher plane of consciousness, through art we can “*slough off the prejudices of his age and background and transcend his own banal subjectivity to become one with the universal voice of humanity...the aesthetic affords access to the universal ground of all representations...we*

*act as particular individuals here and now but at the same time discover a transpersonal, universal dimension that we can otherwise know only in theoretical speculation.”*

(Wellbery, D. 1984 p65)

The growth in advertising through the twentieth century further fuelled these arguments and critic Roger Fry identified the advertising industry as a “race of pseudo artists... as the prostitute professes to sell love, so these gentle men profess to sell beauty”. (Fry R. 1912 p28-29) As the century progressed this anti-consumerist approach was reaffirmed by Ad Reinhardt who argued that the more “graspable” the art the more “saleable” it became. He therefore promoted the idea of “Everything into irreducibility, unreproductibility, imperceptibility. Nothing “useable”, “manipulatable”, “saleable”, “deable”, “collectable”, “graspable.” (Reinhardt A. 1962 p809)

This view, while apparently a rejection of consumerism, focused on the artwork in isolation from anything other than it’s self, and dismissed the external social and political world. Michael Fried a critic writing in the 1960s and 70s dismissed artworks that he considered “theatrical”- artworks that compelled the audience to become aware of themselves within time and space this included minimalism and installation art. From this viewpoint the authentic work does not involve interaction but a conviction imparted to the viewer from the artist.

Through the shifts in approach of modernist art movements, there remained those who countered this view promoting the proactive and empowering role of the audience in engaging with art as set out in John Dewey’s lectures at Harvard (1932) that the work of art is an experience and not merely observed but felt subjectively and this idea increased velocity in the sixties influencing the development of the Happenings and Situationists, identified by Lucy Lippard as contributing to the dematerialisation of the art object from 1966 to 1972. (Lippard L. 1997) This represented a shift towards a focus on a dynamic relationship between artist and audience, a *“creative moment marked by an increasing emphasis on art as a process of collaborative interaction. This interactive orientation implies in turn an art experience that extends over time”*. (Kester G 2004 p53)

Lucy Lippard advocates the idea of artworks that actively engage with everyday life and public spaces, in order to improve our sense of ourselves and quality of life. *“As such, it can raise the special qualities of everyday life embedded in place”* (Lippard, L.1997 p37) Many of the works listed in the “Dematerialisation of the Art Object” were site-specific works bound in time and space. Similarly the physical location of the large urban screens, usually in the town square offer the opportunity to engage with the everyday, so that the public have access to the screens as they move through their daily life. Michel de Certeau also highlights a dynamic between designer and community, suggesting that the public are not mere passive users of culture but that they develop “user tactics”, re-appropriating culture and design. He makes a distinction between intended use of culture and the actual use. (Certeau M. 1984) Through his research he studies the actual everyday use of public space, culture and environments, which has interesting implications for the study of urban screens and this approach has informed my methodology.

Cassells emphasises the importance of the everyday and proposes a co-relationship between artist and audience so that artists *“focus on the experiential, everyday lived experiences of individuals, emphasise collaboration, and attempt to promote the distribution of authority”* (Cassell, J. 1998 p298-327) She highlights the importance of empowering people. This may be through drawing attention to social issues, encouraging discourse potentially to a broad audience. Margot Lovejoy also promotes the idea that artists engage with relevant issues pertinent to the community, suggesting that, *“Cultural productions by media artists often address themes surrounding serious ethical and social issues which, through artists’ sometimes dramatic interpretations, may become accessible and thought provoking to audiences from diverse backgrounds.”* (Lovejoy, M. 2011 p25)

From this perspective artworks may raise awareness to issues in a unique way reaching a wider public. Sharon Daniel argues that we need to define who the audience that we are targeting are and notes that socially driven works often refer to the “People”, she makes a distinction between the “People”, the citizen or political subject and the “people”, “the poor, the underprivileged and the excluded”. She also identifies two disparate groups of citizen and consumer, arguing that the later is often the focus but represents the minority globally. *“Right now the figure of the citizen is eclipsed by that of the consumer-the most powerful minority in a world dominated by other figures- the refugee, the homeless the*

*prisoner, the HIV positive, the addict the squatter the internally displaced, the radical other”* (Daniel, S. 2011 p58)

Sharon Daniel suggests that artists should aim to produce work that will empower the disenfranchised, through the opportunity for self-representation. She identifies *“self articulation and self- representation”* to afford the disenfranchised *“it’s particularity, identity, subjectivity, political agency, and power of choice”*. (Daniel, S. 2011 p58)

This aligns to Slavoj Zizek’s contention that we should not impose our world-view or preconceptions on others, but instead offer a framework whereby the audience can represent themselves. *“Avoid as much as possible the violation of the fantasy space of the other, i.e. respect as much as possible the other’s ‘particular absolute’ the way he organises his universe of meaning in a way absolutely particular to him.”* (Zizek, S. 1991 p156)

Grant H. Kester also reaffirms this view, and questioned the value of the artist as “expert” imposing their views on communities as patronising and advocates artworks that involve active community engagement. He promotes the use of “dialogical” artworks where conversation is used as an interventionist tool. From this perspective artistic practice can be an instrument of change, offering a voice to the ‘other’ in a socially inclusive way irrespective of alternative world-views. (Kester, G. 2004)

Cork et al also promote the potential transformative qualities of art practice; *“We are convinced that art should be transformed into a progressive force for change in the future. Understanding and accepting this premise, artists practicing now should inhabit and understand the context, perspective and social environment of the “other”, or audience/participant, and seek to change that social environment for the sake of more human and egalitarian future”*. (Cork, et al. 1978)

Richard Sennett further supports this and proposes that informal discussion can create ways of forging networks and working together. He promotes the Chinese “guanxi” as a contemporary support network, which he describes as an “intricate and pervasive relational network”. (Sennett, R. 2013 p135) Sennett is dismissive of the opportunities that the Internet may pose as a form of social cohesion instead identifying face to face encounters,

which encourage elaborate, informal dialogic (open) as opposed to dialectic (structured) discourse.

Roy Ascott conversely presents the Internet as a pervasive global connection, a network space reflecting a collective consciousness. *"The new telematics adventure in art, currently played out in the Net but swiftly migrating to the 'smart' environments of ubiquitous computing, has brought questions of distributed mind and shared consciousness to the definition of a new aesthetic. This Technoetic Aesthetic recognises that technology plus mind, tech-noetics, not only enables us to explore consciousness in new ways but may lead to distinctly new forms of art, new qualities of mind and new constructions of reality."* (Ascott R. 1999, p66) Ascott promotes technology as providing opportunity to redefine the self, to escape the confines of our bodies to explore alternative ways of being.

*"VR, telepresence, Hypermedia, may be the prelude to our eventual migration from the body to other forms of identity...Migration from the body does not imply it's disappearance but the emergence of the multiple self, the distributed body, whose telepresent corporeality creates it's own field of being."* Technology then transforms the human experience and our very sense of self, identifying the potential for technology to promote and enhance a shared experience. Ascot highlights the importance of interactivity and active engagement with the public co-creating artworks through a *"shared consciousness"* rather than a focus on the passive engagement of the spectacle, of focus on process over content through special effects and impressive programming. *"...our concern in interactive art with whole systems, that is systems in which the viewer plays an active part, in an artworks definition and evolution, may express an ambition to embrace the individual mind by a larger field of consciousness"*. (Ascott R.1999 p66-67) Ascot highlights the potential of technology to transform the human experience, *"In exploring the technology of life we are exploring what we might become. The self as an ongoing creation gives rise to a non-linear identity"*. (Ascott R.1999 p69) Ascott sees the exploration of consciousness as a key focus in the future development of tech-noetic art. He identifies a *"double gaze"*, a dual existence between the real and the virtual, through which we are able to explore *"...an art of apparition, concerned with dynamic relationships and processes of coming into being."* From this perspective we can explore our multiple selves, the spaces we inhabit, virtual and physical but also how we might transform as individuals and as public audiences. Ascott argues that into the twenty-first century we see *"...a gradual rejection of the dialectic of being, and it's mystification [Nietzsche], in favour of a yea saying, life*

*affirmative recognition of the primacy of becoming*". (Ascott R.1999 p70) From this perspective media art research offers the opportunity to explore the multiple self as a global public impacting on the very nature of the way that humans engage. Ascott's presentation of the Internet as a manifestation of group consciousness suggests that net-art works offer the opportunity to tap into a worldwide group consciousness, potentially to explore the collective unconscious. McQuire also identifies opportunity for media artists to make use of the global network to engage the public, across boundaries, offering empowerment and democratisation. Lovejoy reaffirms the potential for digital media and the Internet to connect people for a more egalitarian future.

*"As a many-to-many dynamic communication system, the Internet embodies a certain access to democratic exchange. Net art exists within the public sphere and is potentially available to anyone, anytime, anywhere-provided that one has access to the network. Mailing lists, blogs, and other forms of networked communication (from mobile phones to other hand-held communication devices) have become a form of agency. Activists are making use of connectivity as a form of political participation"*. (Lovejoy, M. 2011 p25)

Many artists have undertaken interventions in order to engage in discourse around issues. The New York Surveillance Camera Players draw attention to surveillance and since 1996 have presented performances to the cameras based on George Orwell's "1984" (1949) and Wilhelm Reich's "The Mass Psychology of Fascism" (1933). Michelle Teran also on this theme, making guided tours of surveillance cameras, hacking into them to demonstrate the huge areas covered by CCTV in our urban environment.

An urban screens related work that aims to engage with community narrative and discussion is Krzysztof Wodiczko interventionist work involving DIY projection on to statues treating them as canvases, turning the urban architecture or furniture into a screen and thereby subverting the symbols of authority. He has been working with the local communities since 1996, superimposing their faces on to the statues while playing their testimonials. His work includes the "Abraham Lincoln: War Veteran Projection" (Wodiczko, K. 2012) for which Wodiczko interviewed a large number of war veterans and their families and fourteen participants and projected the outcomes on the Statue of Abraham Lincoln in Times Square. In this way he enters into a dialogue with the community, about the horrors of war. His projections aim to subvert the "realm of the sensible" as defined by Jacques Rancière, (Rancière, J. 2000) where messages which the

public usually take for-granted as un-coded, part of the natural state of things, take on significant codes of meaning and communication.

*“I try to understand what is happening in the city, how the city can operate as a communicative environment... It is important to understand the circumstances under which communication is reduced or destroyed, and under what possible new conditions it can be provoked to reappear. How can aesthetic practice in the built environment contribute to critical discourse between the inhabitants themselves and the environment? How can aesthetic practice make existing symbolic structures respond to contemporary events?” (Wodiczko, K 1990 p273)*

From this perspective public artworks in the urban environment can offer opportunity for dialogue and debate, contributing to an inclusive approach to public engagement, which is constantly shifting. This opportunity for debate and self-representation through active engagement of the public can help to redefine our sense of self as our emergent hybrid communities engage in shift and flux, promoting empathy and tolerance through creative exchange. If community is *“a matter of belief”*, *“a set of claims”*, *“lived”* as well as *“imagined”* as proposed by Roger Silverstone (Silverstone, R. 1999, p97) and *“a matter of seeing, a matter which resides in the minds of the members themselves”* (Cohen A. 1985, p20) then artworks on urban screens that offer opportunity to explore our public self through engagement and sociability, with a diverse audience, can potentially ‘add value to public spaces’ (Yue, A. 2009, p264) and enrich the way that we interact in the urban environment. Through this PhD I focus on the use of urban screens to engage a diverse audience through play offering opportunity for the co-production of artwork between artist and audience in order to create unique narrative events. In the next chapter I look at the role of play in interactive environments to engage public audiences.

### **3.2 Play and ludic Interfaces**

Richard Sennett underlines the importance of role-play in society and he argues that the modern being’s search for “true” or “authentic” character as a result of capitalism and secularization has led to a “crisis of public life”. (Sennett, R. 1986 p27) This has been coupled by a rise of the charismatic leader and performer, Sennett argues that the twentieth century citizen became polarized and isolated. Our search for the authentic self results in a

narcissistic view of the world, and with social mores of silence in public, this results in a fear of revealing the private self in public. In the eighteenth century role-play was an expected part of polite society. “... *in a period like the 18<sup>th</sup> Century, actor and stranger would be judged on the same terms, and what one could learn from the one in the domain of art, one could learn or apply to the other in the special domain of impersonal life. And therefore in a very real sense, art could be a teacher about life; the imaginative limits of a person’s consciousness were expanded, just as in an age in which putting other on, posing, and the like seem morally inauthentic, these limits are contracted*”. (Sennett, R. 1986 p41)

Viewed from this perspective art can teach and inform us about life and can offer the opportunity for imagination and creativity as well as empathy for others by observing the world from an alternative vantage point. Sennett argues that the pre-industrial city offered the opportunity to engage with theatricality as part of life and notes that Henry Fielding in 1749 spoke of the street and the theatre as integrated and not merely a metaphor. (Sennett, R. 1986 p64) Jean Jacques Rousseau in his 1757 treatise stated that conditions of life were such that people on the street were forced to behave as actors in order to be sociable, which he saw as disguising true character. (Rousseau, J. 1757) In the 1750s there was a blurring of boundaries within the theatre and the audience and actor would intermingle, literally, as seats could be bought on stage. The audience joined in with the raconteur, often knowing the lines, requesting replay and responding emotionally in a way that would be considered embarrassing to a modern audience. From the 1750s the coffee house was an environment where speech was freely allowed between all social classes, it was socially acceptable for people of all social classes to join any conversation. These were spaces for exchange of free information and acted as a communication hub, many of them publishing newspapers. The art of story telling was practiced as part of this, and narratives, news, stories and yarns were delivered with dramaturgy. (Sennett, R. 1986 p84) At around this time a division emerged between what was considered appropriate adult and childhood play, and social spaces were delineated to reflect this. Previously a man as well as a child may have played with a toy soldier, now the toy became the preserve of the child and the coffee house that of the adult. (Sennett, R. 1986 p92) Sennett suggests that without the opportunity for play, we are bereft of a basic perquisite to a full life, underlining creativity as a component of play and a means of understanding the self. “*It is robbed of the expression of certain creative powers which all human being possess potentially- the powers of play- but which require a milieu at a distance from the self for their realisation*”. (Sennett, R. 1986 p264)

The importance and conventions of play was being asserted and reassessed at this time. Jean Jacques Rousseau referred to play as an essential learning tool in “*Émile*”, or “*On Education*” (Rousseau, J. 1762) and it was during this period, in 1793, that Friedrich Schiller, in a letter to his sponsor defined a new meaning for “play”. He said that it could express the simplest to the most complicated of ideas from:

“...the aesthetic state”, “a state of the highest reality so far as the absence of all limits is concerned” where we can experience a “unity of human nature.” (Schiller, F. 1962 p607) Schiller believed that play draws together the state of nature and the state of reason to create culture. Karl Groos had identified a potential for impact of play on culture and on promoting creativity, he also highlighted an “aesthetic presence” in play. (Groos, K. 1901) Schiller, who also identified a beauty in play, reaffirmed this. Huizinga looked to trace all forms of culture back to play; he saw play as a need to create order, therefore as potentially beautiful. (Huizinga, J. 1938, 2008) Friedrich Buytendijk further aligned play to the creative act, describing the play object as figurative, defining play as stimulative and unpredictable, and with the potential to open up opportunities for fantasy, lending it’s self to interpretation and association. (Buytendijk, F. J. J. 1932) Scheuerl made an association of art and play, and saw the relationship as that between process and form, both of which are accomplished in the moment. (Scheuerl, H. 1965)

Johan Huizinga defined play as an activity external to everyday life, but totally absorbing and thereby suggesting a liberating quality, “*Summing up the formal characteristics of play, we might call it a free activity standing quite consciously outside “ordinary” life as being “not serious”, but at the same time absorbing the player intensively and utterly. It is an activity connected with no material interest, and no profit can be gained by it. It proceeds within it’s own proper boundaries of time and space according to fixed rules and in an orderly manner. It promotes the formation of social groupings which tend to surround themselves with secrecy and to stress their difference from the common world by disguise or other means.*” (Huizinga, J. 1938, 2008)

Roger Caillois identified limitations to Huizinga’s definition of play as it excludes gambling but also notes that while mystery can be part of play, it is not a necessary component and therefore is not a prerequisite and conversely that mystery can be revealed through the nature of play. (Caillois, R. 1958) Caillois identified six elements, which

defined play:

- “1. Free: in which playing is not obligatory; if it were it would lose its attractive and joyous quality as diversion.*
- 2. Separate, circumscribed within limits in space and time, defined and fixed in advance.*
- 3. Uncertain, the course of which cannot be determined nor the result attained beforehand, and some latitude for innovations being left to the player’s initiative.*
- 4. Unproductive producing neither goods nor wealth, not new elements of any kind, and except for the exchange of property among the players, ending in a situation identical to that prevailing at the beginning of the game.*
- 5. Governed by rules under conventions that suspend ordinary laws, and for the moment establish new legislation, which alone counts.*
- 6. Make believe; accompanied by a special awareness of a second reality or of a free unreality as against real life”. (Caillois R. 1958, p128)*

Caillois identified four main categories of games: *agon* (games of skill), *alea* (games of chance), *mimicry* (role play, pretence) and *ilinx* (thrill seeking, disruption of balance etc.). He suggests that in each category the games can be placed on a continuum of “*paidia*” and “*ludus*”. The former involves characteristics of “diversion, turbulence, free improvisation, and carefree gaiety” the latter is confined with discipline, armed with “*tedious conventions... completely impractical requires increasing levels of patience and skill*”. (Caillois R.1958, p128) For the purpose of this study the interactive systems that I have developed as methods have largely focused on “mimicry” with characteristics of liberty, convention, suspension of reality and substitution of a second reality but I have also developed interfaces which involved developing a level of skill to navigate a game, chance and ilinx, disruption of perception and the senses. Below I review media artworks, which fall into each of these categories, with examples involving skill to navigate through space, works using chance, as well as works using mimicry and disorientation. Caillois category of ilinx theory of play could also be applied to digital artworks and an example of this is illustrated in David Rokeby’s account of motion sickness when emerging from long periods in virtual space. “*The most graphic and extreme example of virtual spill into the real is probably VR-sickness, an after- effect of Virtual Reality. My experience was that I would suddenly lose my orientation in space at apparently random moments for about 24 hours after my virtual immersion. I felt as though I were off the floor, and at an unexpected*

*angle. As far as I can tell, the explanation was that, when I was immersed, I'd desensitized my response to the balancing mechanisms in my inner ears in order to sustain the illusion of motion in a purely visually defined 3D space." (Rokeby, D. 1998)*

The sensations ofilinx as described by Rokeby when using his virtual environments for long periods of time, could also be applied to the anamorphic environments that I have developed for "Urban Picnic" and "Occupy the Screen" where the eye is tricked into believing that the participant is balancing on a high precipice or falling into a tunnel.

The relationship between play and games is ambiguous and Claus Pias identifies a need to make a distinction between play and games "...not about games (*Spiele*) but rather about play (*Spiele*), about a playful attitude" (Pias, C. 2011 p164) and notes that the German word for 'play' and 'game' is the same, 'spiele', while the English word for game suggests a rule based, purposeful action, and play a free-form activity. Salem and Zimmerman identify "play" as an experiential dimension of games and "culture" as a contextual dimension of games. (Zimmerman, E. Salem, K. 2006) For the purpose of my research I focus on play, as I do not define the interactive installations that I have developed as games. However I have used Hans Scheuerl's definition of games as a method to create a framework for interactive installations. He defined games as having five attributes:

- (i) *"Freedom", no goal outside it's self.*
- (ii) *"Infinitude" with no preconceived ending,*
- (iii) *"Closeness of the game" the rules or defined area of play,*
- (iv) *"Ambivalence", movement between rule and chance, serious and fun, impulse and cognition, immersion and reflection,*
- (v) *"Virtuality", separate from "real life" and the self (Scheuerl, H. 1965, p607)*

This definition aligns closely with that of Caillois, however provides a little more distinction and is more succinct. Indeed this criteria is common to the key theorist's characteristics of play including "freedom" (Caillois, Buytendijk, Scheuerl), "unproductiveness" (Caillois, Huizinga) "distinct from real life", (Huizinga, Caillois, Scheuerl) "inner infinitude" (Buytendijk, Caillois, Scheuerl) "rules based" (Buytendijk, Caillois, Scheuerl, Huizinga) and "virtual" Buytendijk, Caillois, Scheuerl, Huizinga).

Juul identified a need to elaborate on this definition of games, which has some relevance

to my own interpretation for the open closed framework, however at the same time helps to distinguish the interactive installation from a game. Juul identified six characteristics for games, including that they are “rules focused”, “Variable with a quantifiable outcome”, there is a “value assigned to a particular outcome”, “player effort”, “player attached to outcome” and that there are “negotiable consequences”. Juul noted that the rule-based quality of the game is variable as players may come and go, without achieving a final goal. For my research I have taken “definition of rules” to loosely mean the defined area of play, i.e. the physical boundaries of the screen and the defined area for camera capture. Juul noted that many games do not have goals and are open-ended; again this is in keeping with open systems of interaction as explored through this thesis. Juul notes that many games are no longer bound in time and space. In the case of my own research methods the installations are very much located in time and space as site specific works although this does become variable when using virtual worlds such as ‘Second life’ or “Open Simulator”. Juul also identifies a sandbox or playground nature of games in common with my own installations. (Juul J. 2003) As I mention above I do not define the interactive installations as games and this is borne out by Juul’s definition of games for the following reasons: there are no set of agreed values assigned to outcomes and recognised by participants in the open interactive installations that I have developed, there could be situations where behaviours would be considered undesirable or inappropriate and others desirable, where the participants have an intense sense of enjoyment, but the values of this are not predefined. The interactions become more enjoyable with “increased player effort”, and participants may take pleasure in engaging with the installation in a way that is entertaining to other participants, and in that way become attached to the outcome, however, this is not a necessary component of taking part and some participants may take part in the installation in a passive way, waving and taking photos but still gain high levels of satisfaction from the experience. The consequences of taking part can be measured through a qualitative rather than a quantitate value.

Through my research methodology, I have plotted Scheuerl’s definition of games against a continuum of closed and open play on an x-y axis. The characteristic of “infinitude” for example, in a closed system with a limited number of predefined outcomes would be allocated a low score, in an open system the possibilities are infinite and unpredictable and therefore would sit at the other end of the x-axis. This ties in with the concept of “ambivalence” or movement between rule and chance which can impact on how far

unexpected outcomes are possible, or the potential for rule-breaking and for using chance to impact on outcomes. In a closed system there is little opportunity for moving outside the rules, whether that is using the interface in an unexpected way or making unexpected choices, as in a closed system there may be only limited choices for action. The element of chance further contributes to the opportunity for the unexpected to occur. Opportunities for chance to impact on outcomes can be an important factor in categorising open systems, for example when used in media artworks as a programmed variable, infinite possibilities for outcomes could be offered, which contribute to the openness of a system, such as in Christa Sommerer and Laurent Mignonneau's "Interactive Plant Growing". (Mignonneau, L. Sommerer, C. 1993) The levels of "freedom" or restriction of rules or "closeness of the game" further impact on the openness of the system as this affects how restricted the audience is, allowing room for the unexpected outcome and how far the rules and restrictions of the interface prevent the unexpected from happening.

Csikszentmihalyi proposed the theory of flow, (Csikszentmihalyi, M. 1975, 1997), where highly motivated people become immersed in an activity and lose any sense of time. This is captured in the framework for interactive installations, through the idea of "virtuality", separate from real life or the self, becoming immersed in an action that is make-believe. Through my research I found that if the interface is difficult to use or inaccessible in some way this can break concentration and the potential for immersion into the work, as in "Ludic Second Life" (Gould, C. 2009) and "Urban Intersections" documented below. (Gould C. Sermon, P. 2009) The framework was used to develop a data map from observations of the lineout recording, capturing the screen image seen during the installation of participant reactions and interactions, gestures and body language. This also informed the development of a questionnaire.

The definition of play as a distinct activity to every day life is supported by Paul Valerie who defined play as occurring when "l'ennui peut delier ce que l'entrain avait lit", translated as "play occurs as a diversion from boredom and routine", (Valerie, P. first published 1943) play then is an escape from the everyday but this definition focuses on the entertainment value as opposed to an immersive, discrete activity. Csikszentmihalyi and Bennett identify the importance of play as an escape from the constraints imposed upon us through everyday life, and the resulting stress and boredom. It allows for an escape from real life into another space. They suggest that creativity is enhanced through play. "*The*

*order which social organisation imposes severely constrains freedom of individual action and therefore curtail creative and innovative behaviour.” (Csikszentmihalyi, M. Bennett, S.1971, p56-57) They further suggest that play exists to avoid stress but is arrested when play becomes boring. “Play emerges out of the context of everyday life whenever the latter becomes too worrisome, and slips back into everyday life when the play experience becomes too boring.” (Csikszentmihalyi, M. Bennett, S. 1971, p56)*

What then are the societal benefits of play and what is the potential for play as a form of intervention? Sutton Smith made a distinction between the “intrinsic” game related motives for playing and the “extrinsic” cultural value of play. He defined rhetoric within accounts of play: play as progress, play as fate (or chance), play as identity, play as power, play as the imaginary (creativity and innovation), the rhetoric of the self (fun, relaxation and escape) and the rhetoric of play as frivolous, the protest of the trickster or fool as intervention. (Sutton Smith, B. 1997)

Sutton Smith highlighted the need for flexibility in the modern world, promoted by play, which enhances the “potential variability” of the brain. He proposed that play could enhance culture, civilization as well as human survival. Winnicott identified a “transitional phenomena”, the interchange between the inner reality of individuals and the shared external reality. (Winnicott, D.W. 1971) Dovey and Kennedy identify this in computer games as the relationship between the subject and mediated reality, between watching and doing. (Dovey, J. Kennedy, K. 2006) This is relevant to my own practice using mixed reality environments, where the participant is invited on entering the frame to leave the position of subjective audience observer and engage in active participation with the object and group. The more ease with which the audience can forget the mechanics of the installation, the more they leave a sense of the self, behind. Winnicott defines a dynamic between the self and engagement with the object *“the thing about playing is always the precarious of interplay of personal psychic reality and experience of control of actual objects”*. (Winnicott, D.W. 1971, p47)

Silverstone highlighted a proactive role of participant through the identification of the concept of “tissue boundary” the viewer as active participant in the creation of meaning: *“Play enables the exploration of that tissue boundary between fantasy and reality, between the real and the imagined between the self and the other. In play we have license to explore ourselves and our society, in play we investigate culture but we also create it.”* Winnicott identifies a notion of the third space where continuities exist between child and

adult play. He highlights the liberating and creative nature of play. *“It is in playing and only in playing that the individual or adult is able to be creative and use the whole personality and it is only in being creative that the individual discovers the self.”*

(Winnicott 1971, p54) Winnicott identifies play as essential to the psychic health, and internal and external representation is the root of personality and culture. Victor Turner also advocated ritual play as important to the formation of identity and culture identifying two origins of cultural activity “liminal” a ritualistic rite of passage, and “luminoid”, individualised and commodified, plural and experimental. He saw the later as having transformative, questioning, interventionist qualities. (Turner, V. 1982, p58)

From this position, play enhances creativity, as well as offering opportunities for identification of the self and community, (Winnicott, Turner, Sutton Smith) suggesting that playful open systems are an ideal mechanism for engaging with the public to offer co-authorship and agency, to contribute to wellbeing as a diversion from stress, but also to promote an open and creative response from participants. The underlying implication to all this is that there is a prerequisite that the framework offered by the artist is accessible and enjoyable. Csikszentmihalyi and Bennett note that we do not know if there was more or less play in preliterate societies or technological society and today, the rise of the gaming industry has brought with it much interest in the use of technology for play and enjoyment. Dovey and Kennedy however warn that that computer games are *“experienced differentially within our culture depending, age, race, geography, gender and class”*. (Dovey, J. Kennedy, H. 2006 p20)

Playful interactive environments for urban screens offer an alternative as open systems in the urban environment often positioned in shopping centres they aim to attract a broad demographic and potentially because of the intuitive interface can offer the opportunity for those who usually do not engage with art or with technology to play, building confidence with technology and contributing to culture through “luminoid” play, as an intervention or potential instigator of change and to contribute to our sense of “fun and enjoyment”.

“Ludic Interfaces” was a theme for ISEA2008 and Nadarajan Gunalan identified in the conference proceedings that little research had been undertaken in the relationship between technology and fun. *“The infantilization of play, that is, the historical association of playing with children and non-serious activities, has led to the systematic exclusion of play and fun from ‘serious’ creative, scientific and technological investigations. While the ludic*

*(i.e. play-related) dimensions of artistic creativity have been variously explored recently in both artworks and in scholarly research, the interactions between technological developments and the pleasures described as 'fun', are few and far between...However, there are those who assert that there is still much more need to investigate the complicities between technology and pleasure in these experiences and to develop alternative modalities of exploring the technological possibilities of pleasure and vice versa."*  
(Gunalan, N. 2008, p4)

Through this thesis I explore the relationship between technological developments, play and fun and how we can develop participatory artworks, which maximise fun and enjoyment in order to potentially contribute to a sense of wellbeing and a positive shared memory of place. Roger Silverstone highlights the importance of pleasure to be found in participation and play and he suggests a positive impact on social cohesion, *"There is pleasure in participation. In the partnership and the rivalry. In observation in identification, in sublimation, in regression, in playing and in playfulness."* (Silverstone R. 1999, p45 Key to this is the concept of interactivity, touched upon in this chapter but explored in more detail below.

### 3.3 Interactivity

*"All arts can be considered interactive if we consider viewing and interpreting work as a kind of participation".* (Sakane, I. 1989 p3 in Rokeby, D. 1995 p134)

Whilst this acknowledges a relationship between artist and viewer in the construction of meaning, theorists such as Benjamin have promoted a much more proactive relationship between artist and audience, a two-way collaboration. He makes a distinction between "producers" and "consumers" identifying the former as active and the latter as passive.

*"What matters, therefore, is the exemplary character of production, which is able first to induce other producers to produce, and second to put an improved apparatus at their disposal. And this apparatus is better the more consumers it is able to turn into producers—that is readers or spectators into collaborators..."* (Benjamin, W. 1978 p101-120)

From this perspective the artist can provide a framework from which others can co-produce, reflected in Brecht's vision for the possibilities of radio *"Let the listener speak as*

*well as hear...bring him into a relationship instead of isolating him”* (Brecht, B. 1932 p53)

Manovich states that by definition the computer interface (HCI) is interactive, but that it is a mistake to categorise all art that uses computing as interactive. (Manovich, L. 2005)

Sometimes interactive works appear to offer the audience creative opportunity, through an interface that provides choices, however point and click and motion tracking can often disguise nothing more than a series of choices made by the artist. Sharon Daniel argues that the collaborative aim of media arts focuses on the potential to create new experiences and exchange revealing new insights, but can be overshadowed by the appearance of audience autonomy and choice, disguised by the physical function of the interface. (Daniel, S. 2011 p74) Kelly reaffirms this view, *“Real Collaboration is often undermined by the authority of the artist, who retains control of the technology. The apparent autonomy given to a participating spectator is often a false front, simply a product of digital technology’s ability to offer more varied, but still strictly controlled routes through a closed set of prescribed material”* (Kelly, J. 1997) From this perspective interactivity can offer nothing more than a prescribed set of choices.

Sharon Daniel goes further making a distinction between interactivity and collaboration, and sees the former as a passive user experience. (Daniel, S. 2011 p74) Margot Lovejoy, however argues that interactivity can be divided into two approaches the “monologic” (point and click) and the “dialogic” approach which enables a collaborative exchange between artists and potentially multiple participants provided by *“telecommunications that interactively make use of global network connectivity”* (Lovejoy, M. 2011 p14) which Margot Lovejoy describes as *“open”*.

Jeffery Shaw and Peter Weibel identify three narrative types of interactive works, *“transcriptive forms”*, multi-layered narratives, *“recombinary permutation”* involves an element of chance with random programming and *“distributed forms”* which offer open systems for multi-direction communications to take place. (Lovejoy, M. 2011 p18) These definitions suggest a continuum between open and closed systems. At the “open” end “distributed forms, at the closed, “transcriptive forms” with “recombinary permutation” in the middle. The characteristics align to Caillois identified forms of play, “ludus” (goal orientated and rules focused) aligning to closed forms of interaction and “paidia” (free play) to open systems. (Caillois R. first published 1958) I am going to use Weibel and Shaw’s definition to explore interactive works below.

Roy Ascott identifies a focus on “whole systems, that is systems in which a viewer plays an active part in an artwork’s definition and evolution”. (Ascott, R. 1999 p67) Ascott suggests that the removal of the ‘second observer’ or ‘phantom audience’ is a necessary precursor to the truly “whole system”, so that all participants are fully active in the outcomes and the potential for spectacle is removed, in order to achieve “an open ended evolution of meanings and the closure of an autonomous frame of consciousness”. (Ascott, R. 1999 p70) From this perspective an audience can inhibit the connectivity of participants, suggesting that with out the audience the participants become separated from the external world and connected through the shared activity. This aligns to play theorist (Caillois, Huizinga, Scheuerl) definition of play as an activity outside of the everyday experience, but takes the idea a step further through the suggestion of a shared consciousness.

Stiles and Shanken identify “agency” as an important factor in interactive systems, meaning and intention as well as effective communication to an audience is important. They argue that artworks “*must activate semiotic signification that is literally full of meaning*” (Stiles, K. and Shanken, E. 2011 p35), potentially changing audience understanding through “agency”. They refer to Browning’s definition of agency, “*The concept of the agent is required in order to allow for the possibility of freedom, communication, comprehension and mystery. “Culture in general...rests upon...agency.”*” (Browning 1964)

Stiles and Shanken argue that interactive works should offer the audience “agency”; a proactive role, with freedom to make decisions and be creative, offering opportunity to change and influence society. “*Agency involves the freedom to create, change, and influence institutions and events, or act as a proxy on behalf of someone else. In both cases agency is measured by the ability and the responsibility to have a meaningful effect in a real-world, inter-subjective social conscience.*” (Stiles, K. and Shanken, E. 2011 p36) This definition of agency is an underlying concept of this thesis and of my research, that of audience empowerment to be creative and to contribute to the work. It is interesting that Browning’s definition of “agency” included the concept of “mystery”, an aspect of his definition that I reject as an integral aspect of agency, but that might instead be a by-product. This was also the conclusion that Caillois has when Huizinga uses the concept of “mystery” in his definition of play. Similarly Rancière promotes the idea that mystery should be used in the theatre to activate an audience to engage in the content of the work. This is the approach that Blast Theory take in works such as “Uncle Roy is all Around”

where the participant plays detective, however the premise of this idea is based on the audience discovering a predefined outcome, prescribed by the artist, therefore limiting levels of “openness”.

Umberto Eco first wrote about the ‘open work’ in 1962, (Eco, U. 1962) exploring literature that aimed to open up possibilities for unpredictable outcomes. Media art’s intrinsic interactive qualities as defined by Manovich have lead to further exploration of this concept of interplay between viewer or reader and artist to impact on the narrative. (Manovich, L. 2005) Roy Ascott identified the importance of interactive art through quantum physics, quoting J. A. Wheeler *“To describe what has happened one has to cross out that old word ‘observer’ and put in it’s place ‘participator’. In some strange sense the universe is a participatory universe”*. (Ascott, R. 1990 p 242) This suggests that interactivity is key to the operation of the natural world and the development of the web has lead to a virtual global connectivity. As networked systems developed many artists started to explore the possibilities of creating a collaborative dialogue through their works using “open” or “distributed forms”. (Wiebel and Shaw in Lovejoy, M. 2011 p18)

Distributed forms include Allan Kapprow’s happening work “Words” (1962) where he asked the audience to add to slogans exhibited in two rooms in the Smolin Gallery, New York in one of the rooms text hung on the walls, hand drawn, stencilled and could be read in any direction, in the other, graffiti and chalk drawings were exhibited, with chalk on string so that the audience could add to the work.

This two-way connection was explored by media artists Kit Galloway and Sherrie Rabinowitz who presented “Hole-in-Space” (1980), gaining free access to a satellite connection, they linked the scene outside two shop windows in New York and Los Angeles. This was not announced in the press until the final day, and resulted in an exchange, which developed over a period of three days. *“The results were astounding and often very moving...people sang songs, played games, even made contact with long lost relatives”*. (Bull, H. 1993)

In 1983 Roy Ascot termed the phrase “Telematic Art”. Robert Adrian X developed a sponsorship with IPSA known initially as Artbox and later as ARTEX. (Artists Electronic Exchange) His “World in 24 hours” (1981) won a Golden Nica prize at Ars Electronica, a global network-linking artists who exchanged content through slow scan, fax, telephone

and computer conferencing. He is proposed to be the first artist to use amateur wireless operators to exchange images and content through a twenty-four hour conversation.

Roy Ascott's "La Plissure du Texte" (1983) applied distribution of authorship on a "planetary fairy tale" using archetypes to inform text and image using ARTEX. Ascott argued that telematics offered an *"expanded global consciousness that is greater than it's sum of parts"* (Shanken E. 2009, p34)

Paul Sermon a former student of Ascott, presented Telematic Dreaming (1992), with support from Telecom Finland, which joined participants in remote locations on a bed, demonstrating the connection felt though the third space created by the body image avatar on screen. This piece was an open system, which gave the audience freedom to play, often bringing their own props into the environment and through the interactions unique narratives unfolded on screen.

Rafael Lorenzo Hemmer's "Body Movies: Relational Architecture" (2001-2003) uses play to engage the audience when floodlights cast shadows of passers by on a civic building in the city square, which triggered unexpected levels of interaction amongst the participants who played with their shadows, engaging with others, dancing, exploring scale (the silhouette became large when close to the light and small when far away), sequences emerged such as the apparent bouncing of a smaller character, creating amusement amongst participants. Photographs collected previously of people in the square, were revealed on the walls within the shadows of the passers by.

Transcriptive or multi-layered narratives include John Cage's "4'33" (1953) which initially employed all of the conventions of a traditional orchestra. I have included this work in this category because it has opportunity for layered narrative, but a number of parameters that restrict the potential as a multi-direction interactive system. The audience was *"interpreter, author and actant in the system... in favour of contextual inter-authorship."* (Daniel, S. 2011, p61)

Myron Kruger's "Video Place" (Kruger, M. 1969) is a prototype for artificial life (a phrase coined by Kruger in 1973). A projection of the user's silhouette is superimposed on animations, which respond to the participant's touch, with over fifty interactions and compositions on offer. Kruger noted *"a very natural desire to identify with the image on the screen...it was as if evolution had prepared us for seeing ourselves on television"*

*screens combined with computer images*” (Kruger, M. 1988) Kruger suggests that technological developments have become integrated into the way that we operate in the natural world, referring to an extension of the self, aligning to McLuhan. (McLuhan 1962)

A “Closed system” of interaction is a system where the user is offered a fixed set of options, which could involve a multitude of choices, but the artist predefines them. This includes the work in the early 1990s exploring hypertext and CD-ROM, driven by software such Hyper-card, Super-card and then Director. An example of this is Masaki Fujihata’s “Beyond Pages” (Fujihata, M. 1995) an immersive interactive book within an installation, which acts as an interface to trigger response in the environment including lights switching on and off and sound. Built using Director, the work conforms to the rules of a closed system. This is a transcriptive form of interactivity as there are opportunities for the audience to interact with the environment, potentially creating multiple narratives. This work again has a number of parameters- visitors may turn the pages if the book in an unexpected sequence, but the form of the book suggests a linear sequence.

From the mid 1990’s these closed interactive works influenced early web based HTML net-art. Nick Crowe for his “Service 2000”(Crowe, N. 2000) purchased alternative domain names for the major London galleries and created spoof sites designed with purposeful bad taste, with incongruous flashing kitsch animations, textures, and clip art. This piece explored the value of the domain name before brands had become savvy about their virtual presence.

Closed systems or “transcriptive forms” (Weibel & Shaw in Lovejoy, M. 2011 p18) would include David Rokeby’s “n-Chant” (2001), bots interact, sharing a data base comprised from Rokeby’s “River of Games” (1991) but programmed to respond intermittently to the human voice, winning the 2002 Prix Ars Electronica. Jill Scott’s “Frontiers of Utopia” (Scott, J. 1995) is a historical narrative that allows the audience to consider focusing on cultural and political ideals through eight characters.

Many of the virtual reality systems, (a phrase coined in the 1980s by Jaron Larnier) were closed systems, but offering vast layers of data paths, such as Char Davies, “Osmose” in which the visitor can wander through a virtual landscape, this is a solitary experience, where the participant uses their breathing to navigate through the space. In “Ephemere” (1998) the audience can observe the single participant’s movements through a space, which merges the inner body and landscape presenting the body as a microcosm of the

earth.

In the 60s artists had started to experiment with the medium of television. The “Happenings” artist, Wolf Vostell made “Television De-collage” (1963) and in the same year Nam June Paik exhibited “Exposition of Music-Electronic Television”(1963) at the Galerie Parnass in Wuppertal, Germany, using four customised pianos, twelve customised TV sets, sound objects as well as video and tape installations. The audiences were invited to interact with the piano, which would then interfere with the TV broadcast, revealed in cathode ray tubes.

By the 1970s artists started to engage with the discourse of surveillance, turning the camera on the audience. Peter Weibel’s “Observation of Uncertainty” (1973) presents the viewer’s back image, using three video cameras so that the participants see themselves on screen only as others would usually see them.

As telecommunications developed artists started to beg and borrow time on the networks. In thirty minutes of free broadcast time Douglas Davis billed “Electronic Hokkadim” (1971) as *“the world’s first participative telecast”* where images on screen responded to the sound waves created by the voices of callers to the station. Davis later said of his work *“My attempt was and is to inject two-way metaphors- via live telecasts- into our thinking process. All the early two way telecasts were structural invasions...I hope to make a two way telecast function on the deepest level of communication...sending and receiving on a network that is common property.”*(Davis D. 1968)

In Perry Hoberman’s “Bar Code Hotel” (Hoberman, P. 1994) participants could scan a bar code to add objects with sound to a three-dimensional virtual environment to create an eclectic mix of floating objects and sounds on screen.

A similarly playful environment was Chris O’Shea’s “Hand from Above” (O’Shea C. 2009), commissioned for the Liverpool Big Screen, in which a giant hand on screen interacts with the public, poking, prodding, tickling and lifting local shoppers as they go about their daily business. Some of the participants walk on ignoring or not seeing the activities, but others start to play, bending over, running away and performing playfully within the piece. Hudson Powell and Joel Gethin Lewis developed “Hungry Hungry Eat Head” (Powell, H. Gethin J. 2009) for the BBC Big Screen, which used virtual reality tags to map a monster head on to the body of participants again encouraging the audience to

play. Brendan Oliver developed “Star Catcher” (2009) where participants can catch stars that fall while a Christmas tree grows and twinkles. Participants race to be the first to grow their tree in order to receive a message from BBC faces.

In 2003 Blast Theory premiered their “Uncle Roy is all Around You” (Blast Theory, 2003) at the ICA, this subsequently traveled to other cities, as later interpretations. The participants are given sixty minutes to find Uncle Roy, armed with hand held devices, and with online audience helpers they are guided through the city to specific locations, where actors take testimonials and give clues to move them through the game.

Jeremy Bailey’s “Master/ Slave Invigilator System” (Bailey, J. 2013) allows Bailey as performance artist to exist in multiple cities at the same time, taking over the bodies of Lycra clad ‘slaves’ with robot heads complete with a screen showing a live video feed of the artist. The avatars roam the city and the artist is able to speak to multiple participants. Joan Mora and Chema Blanco developed the “Puppet Master” (Mora, J. Blanco, C. 2013) an interactive work for urban screens where participants with hand held devices are able to manipulate the on screen environment, augmenting objects, rubbing things out, using text messages and overlaying canvases. Suse Miessner developed “Urban Alphabet” (Miessner, S. 2014), an app which enables participants to create an alphabet unique to a city, having gathered examples of fonts around the city, users can send messages on the urban screen to connected cities, shown as part of the Connecting Cities, Participatory City 2014 in Riga, Sao Paolo and Berlin. These projects use screens in the urban environment and actively engage with the public, with an interesting relationship between the handheld device and the urban screen, facilitating personalised responses from the public.

From the middle of the twentieth century computer networks offered the opportunity for random programming, thereby removing the artist from full control over the art work but also offering a vast storage of data and this lead to further opportunities for the exploration of interdisciplinary works. Building on a long-term practice explored by the early modernists and the Surrealists who introduced the application of systems theory to produce collaborative art, such as the “Exquisite Corpse” drawing game. This involved the idea of random chance, aligning to Wiebel and Shaw’s category of open systems, “recombinatory permutation” and to Caillois definition of “alea” or chance as play. (Caillois, R. 1958)

Artists applying systems theory to produce art, by replicating the binary process, included

Sol Le Witt with his “Incomplete Open Cubes” which he described as “*a machine that makes work*”. (Witt, S. 1974) Vera Molner foresaw computers as a way to “*produce combinations of forms never seen before, either in nature or in museums, to create unimaginable images.*” (Shanken, E. 2009 p26) Her “Machine Imaginaire” (Molner, V. 1980) was a programmed set of behaviours aimed at generating randomness.

Contemporary artists make use of the vast capacities for mass data storage, using random processing, and Jennifer and Kevin McCoy, in “How I Learned” (McCoy J. K. 2002) used film footage from the TV show “Kung Fu”, broken down shot by shot, and reordered using computer programming to answer four questions about life. They use programming as part of a live random edit in a number of works and in the “Soft Rains” (McCoy J. K. 2003) series, they created a miniature diorama which is brought to life through the programming of their edits of footage from tiny cameras placed around the set. The outcomes are screened within the installation bringing dramaturgy and apparent movement (sometimes using electronic components) into the set.

Stelarc’s “Ping Pong Body” (Stelarc, 1996) aims to hand over physical control of the artist to Internet users, offering the online audience the opportunity to trigger electrodes on his body, creating involuntary gyrating movements, which were uncomfortable to observe.

Another work that encourages playful interaction, using an unusual interface, as well as infinite possibilities for an individual outcome or narrative, is Laurent Mignonneau and Christa Sommerer’s “Interactive Plant Growing” (Mignonneau, L. Sommerer, C. 1993), which consisted of real plants, responding to touch to make virtual plants grow.

Artworks for urban screens using random processing include “Me You and Us” (Eilbeck, A. Bailey, J. 2011) an interactive system developed for the BBC Big Screen which captures footage of the participants below the screen and is looped backwards and forwards at variable speeds. Similarly “Feedback” (Hellicar, P. Lewis, J. 2010) at the Round House was produced by One Dot Zero and was inspired by the idea of the circus, this work is designed to scramble the visitors mirror image using random processing.

Pipilotti Rist’s “The Room” (Rist, P. 1994-2007) is an installation comprising of oversized sofas that aim to transport the visitor back to the less empowered stage of childhood. An oversized remote control gives participants opportunity to switch channels and watch

previous works by the artist.

Tom DerFanti and artist Dan Sandin lead the development of the CAVE (Computer Automated Virtual Environment) in 1991. Donna Cox, Marcus Theobald and Robert Patterson developed a multi-user VR application joining remote CAVES to enable data sharing.

Jeffery Shaw's work has been influential to the development of virtual reality works. "The Golden Calf" (Shaw, J. 1994) used a small LCD monitor attached to a plinth, which displayed a three-dimensional cow, a simulacra that exists only within the screen.

These works are closed systems of interaction but offer different levels of audience choice. They offer playful environments for audiences, "Me You and Us" (Eilbeck A. Bailey, J. 2011) for multiple use, "Feedback" (Hellicar, P. Lewis J. 2010) for individual users. Both using random processing but with no room for the unexpected as there are multiple but finite options available. This does not necessarily impede on an artwork's interventionist qualities, or potential for play or to promote change, and draw public attention to issues, as with Crowe's "Service 2000" (Crowe, N. 2000) or Krzysztof Wodiczko's "Abraham Lincoln". (Wodiczko, K. 2012)

I have mapped fifty of these artworks and others against the data map that I have developed using Hans Scheuerl's definition of games (*Scheuerl, H. 1965*) to measure the open and closed systems. (*See 6.4 and 6.6*)

## 4 Practice Methods

In the next chapter I present my practice-based research, including documentation of my research methodologies and outcomes. Before reading each section please follow the link to the website and where relevant watch the corresponding film within the folder. I have summarised each chapter to present key findings. Please see the appendix for published articles and chapters on the works as well as images and data charts.

The urban screens installations were site specific so the concept was always tied to place, and at the same time my research method involved reflection, creation, then further investigation (Candy, L. 2011p45). I reflected on my practice within my blog, in sketchbooks, as well as through papers published in journals and in conference proceedings. This gave further opportunity to share ideas and outcomes with a specialist audience, who posed questions and prompted further ideas for investigation. Examples of outcomes informing subsequent works include “Ludic Second Life” which used motion-tracking software created by Alasdair Swenson which was developed further for “Urban Intersections” with the help of programmers from “Second Places”, refining both software and the target for tracking, which I developed using LED lights instead of a red cloak. The limitations of the tracking software, impacted on the opportunity to play, breaking the suspension of disbelief, so I abandoned this method in subsequent works, and in “Mirror on the Screen” audiences used a keypad joystick to navigate the environment. “Picnic on the Screen” utilised animations on a timeline, with cardboard props to connect to the screen. In the further exhibition of the work I develop augmented reality tags so that the audience could control the animations, using the cardboard tag to connect to the screen. Animation featured as environment in “All the Worlds a Screen” but participants were encouraged to create narrative events through the use of props, giving the audience license to co-create through the development of characters. The installation engaged with community groups, including a poet and performer, who prepared for the event with props and costumes. This influenced the way that public engaged with the installation, giving the audience increased confidence to play in a ludic or “phantasmagorical” manner. (Sutton Smith B. 1997) The design of the sets of the urban screens installations increasingly triggered audience movement. “Picnic on the Screen” suggested a seated position on the mat, “All the world’s a Screen” encouraged more movement with sets that included, for

example a beach scene, but often involved objects on which to perch. “Occupy the Screen” particularly encouraged active movement with optical illusion suggesting balancing across high crevices and jumping into geometric ravines. The audience responded well to this freedom of movement, in which they became immersed in play, aligning with Plato’s observation of the origins of play as arising from a need in animals and humans to leap.

The urban screens artworks produced as part of my methodology were live unique events and I was present throughout the presentation of each project, making changes to build on elements that I observed working effectively. I have developed a number of installations applying a low-fi aesthetic to break the illusion of the perfection of the digital world of simulacra. This is apparent in “Ludic Second Life” and “Urban Intersections” where I built body parts over the avatar to question the aesthetic convention of virtual embodiment which use ‘body beautiful’ archetypes. Through my artistic practice I have explored the use of props to connect people to the screen, both virtual and physical, again using a low-fi aesthetic. For “Picnic on the Screen” I created props made from discarded cardboard found on site. The development of this piece as “Urban Picnic” transposed the physical prop into an augmented reality tag, which meant that users could control and select the animations on screen. For “Urban Intersections” I worked further with the physical prop creating a head, which was used to motion track the audience through a maze on screen. This hand made papier-mâché head worked in contrast to the super real aesthetic of the Second Life landscape, but was representative of the mask-like head worn by the avatar. Audiences were encouraged in all of the works to include their own props in order to add to the layers of narrative, such as the cat hat, which was used to create a half-human-half-cat character. In “All the world’s a Screen” a model house was presented with seven rooms each symbolic of a different stage of life, relating to the seven ages of man. The props used represented the everyday, such as the office and the children’s room, with toys including dinosaurs, horses, a car and model characters, which participants were able to move around as they pleased. It was this free movement, which allowed for ludic instances, such as at one point a dinosaur was moved directly in front of the camera lens so that it appeared to be larger than participants in the environment. This use of physical props has proved very effective in creating co-produced works with topoi and characters suggested by the artist and audience, employing improvisation to develop a narrative exchange between artist and public as well as between participants to create a live shared storytelling event.

#### 4.1 “Ludic Second Life Narrative” BBC Big Screen Liverpool 2009

*<http://charlottegould.org> -Website documenting Urban Screen installations*



*Figure 1 “Ludic Second Life Narrative”, avatar confronts first life participant on screen April 2009, © Gould, C.*

Ludic Second Life Narrative was shown on Saturday 25<sup>th</sup> April 2009 in a commercial shopping area, so that people could engage while passing through. It was a crucial part of the concept that this did not take place in a gallery, but in a busy shopping street where it became part of people’s everyday routine. As playful environment, it encouraged interaction both with the content and the urban environment allowing users to explore alternative networked spaces and develop unique narrative events. This is a site-specific work, designed for the BBC Big screen it was shown as part of the “Moves 09 Festival” and was commissioned by BBC Big Screen curator Bren Callaghan, amongst others in a drive to bring more interactive works to the screens.

Ludic Second Life is a playful environment, encouraging interaction both with the content and urban environment allowing users to explore alternative networked spaces and develop unique narrative events. It was originally designed to link the screens in Manchester and Liverpool, so that the users in both cities could interact with the avatar on screen, however

technical considerations in relation to the screen set up in Manchester meant that this was not possible.

Ludic Second Life Narrative questions the way that the public embody themselves in virtual worlds with a ludic interface, which offers the public opportunity to engage in the urban environment through play. Staged in an ‘enchanted wood’ as a virtual retreat and referencing the physical town square in Liverpool, the aesthetic of the space and the avatars question the convention of realism in virtual environments. It offers an alternative to the stereotypes, which prevail in “Second Life”. “Second Life” is a three-dimensional virtual world entirely built and owned by its residents. Since opening to the public in 2003, it has grown explosively and today is inhabited by a total of 12,000,000 residents from around the globe. It consists of a vast digital continent, teeming with people. The avatars in this installation have a puppet like quality rather than the stereotypical “Barbie” and “Ken” archetypes. So while the user’s body controls the puppet in a natural and intuitive way the avatar does not attempt to resemble a first life human.

The interactivity was instinctive as movement of the avatar was controlled through motion tracking. One visitor could play at a time, wearing a red cape for tracking purposes. There were huts within the forest housing live video feeds, displayed on the interior walls. The aim was to explore the virtual retreat finding references to fables and fairy-tales, used because as fables they are shared narratives, recognisable to the majority as the participant travels through the virtual forest retreat, to find the first life environment. Through this mixed reality blurring of second and first life, live public participants and online users could engage and interact within the piece.

Ludic Second Life Narrative was specifically designed for the BBC large format public video screens and the project explored their creative and cultural potential. It aimed to offer the opportunity to be involved in the development of innovative ways of engaging with the public in an urban environment using digital technology. Through the mixing of realities of the virtual and the real, users could explore alternative networked spaces and develop unique narrative events. The piece explored ways that we might use technology to play and have fun, how we use technology as part of our leisure pursuits, but also how it may be used for creative play and to enhance our experience of the urban environment as well as our interactions with others.

“Ludic Second Life” worked with both an outdoor public audience and through Second Life as a social networking space, with millions of online participants worldwide. Through this project I explored the creative and cultural potential of urban screens looking at ways of using technology to engage with people in the urban environment, allowing the user to engage and interact rather than passively consume as a spectacle, as defined by Debord. (Debord 1995)

This project used the three-dimensional multi-user social networking environment of “Second Life” and developed the interactive function of motion capture in first life, which was mimicked in “Second Life” with a live video stream from the Clayton Square in Liverpool, hidden within the “Second Life” environment for the user to discover. The motion capture and avatar movement techniques developed for this project were unique to “Second Life” and involved the following procedure. A single member of the audience in Liverpool and Manchester wore a red cape, which a video camera located above the large BBC screen viewed in the square below and the movement of the cape across it. This movement was then traced on a Mac computer as x/y coordinates within the shot, which was then translated into the x/y coordinates of Second Life world and instructed the avatar to move in a corresponding direction to the movement of the public audience member. Essentially the x/y coordinates from the motion capture camera drove and pushed the x/y coordinates of the avatar in “Second Life”, which means controlling the x/y coordinates to force the avatar to move, rather than the other way around which is normally the case. The video aspect of the project involved a live video stream from Clayton Square, Liverpool. When the user navigated around the Second Life environment they discovered small circular wooden huts that contained a live video stream stretched around three hundred and sixty degrees of the inner wall. As the avatar entered the hut the video automatically started to play, with the huts presenting live streams from Liverpool.

There were guides at Clayton Square Liverpool to help the public interact with the work, and this inspired confidence to engage with the piece. The very location of the piece as well as the support available encouraged those who do not usually engage with art and technology to participate. “Ludic Second Life Narrative” was shown as part of the “Moves 09” festival so also had a specialist festival audience. The project was developed and part commissioned by BBC Big Screens co-ordinator, Bren Callaghan, who was the chair of the “Moves 09” festival and in accordance with BBC and Local Council guidelines and

approval. My first project on this theme was “Ludic Narrative”, an installation using Bluetooth technology and mobile phones shown at the “Futuresonic” festival in May 2008 and on which I delivered a paper at “ISEA 2008” Singapore where one of the conference themes was ludic play. “Ludic Second Life Narrative” led to the delivery of a paper and two further projects for large urban screens, one for the “Village Screen” Glastonbury and another which was a second development of the technology used for this project, was developed for a group exhibition at “ISEA 09” (the “International Symposium of Electronic Art 09”) “Urban Intersections”, where I developed a motion tracking artwork within a collaborative Second Life space (*please see 4.2 and 4.4*). The development of this installation and its public exhibition was the second project that I have developed for urban screens on the theme of ludic interfaces, aimed at encouraging public engagement in the urban environment, but was the first project to be presented on the BBC Big Screen.

This interactive installation complies with Johan Huizinga definition of play in the following way: it is a free activity, distinct from real life, though integrated into the everyday. It is not serious but absorbs the player intensely, although users did at times move in and out of the concentrated zone and showed signs of self awareness, this was particularly because the motion tracking software was not sensitive enough to motion, with a time delay so people would become confused and stop to wait for the software to catch up, at the same time breaking concentration. The activity was connected with no material interest, and no profits could be gained. It had clearly defined boundaries of time and space, with fixed rules and is framed by the boundaries of the screen, as well as the programming. The motion tracking would not work unless the user wore red (a cape was provided). Huizinga suggests that by definition games promote the formation of social groupings, with participants surrounding themselves in secrecy, differentiating themselves from the world. (*Huizinga, J. 1938, 2008*) Urban Second life Narrative had an element of mystery to it in that the participants had to find references to fairy tales as they explored the space, to ultimately confront themselves in a hut. The interactivity was “mystery meet”, with no instructions or levels; it was designed as an environment that the user could explore. People watched the game in groups; often they were in friendship or family groups as the installation ran on a Saturday in the Liverpool city centre and they were visiting the shops. Participants watched each other, both their own group and others, then would initially tentatively move around the space. Some of users came back to try to improve their navigation skills, as well as to explore areas that others had not explored,

such as to travel up into the Liverpool tower, where reference to Rapunzel's spinning wheel could be found, complete with scissors and a lock of hair.

"Ludic Second Life Narrative" aligns with three of Roger Caillois categories of games, that of *mimicry*, as it is a game of role play and pretence, where the user navigates a puppet like avatar around a virtual space, and that of *alea*, as there was an element of chance that impacted on the user journey and *agon*, as there is a level of skill involved in negotiating the space. Caillois suggests that in each category the games can be placed on a continuum of *paidia* free improvisation and *ludus* skill and focus. Dovey and Kennedy who suggest that games can meet criteria for both ludus and paidia contest this. (Dovey, J. Kennedy, K. 2006) "Ludic Second Life Narrative" aligns more closely to the characteristics of *paidia* as carefree, diversion from everyday life and fun, though it has parameters in terms of the software which fit the definition of "ludus" as confined by the rules and conventions.

I gathered responses through continued observation and video documentation. The public recognized this piece as a game, and many of the participants assumed that this was part of a games engine, this meant that adults and children alike wanted to take part, as from my observations culturally people understand and are willing to engage with games culture, although because it involved one user at a time, I was concerned that people were more likely to be inhibited by the role of sole participant in the spot light, observed by the public within the space. Roy Ascot proposes that for interactive works there should be no observers only participants as the former can interrupt the focus and confidence of the user. In this situation it is not practical or ideal to exclude the audience, as the objective of the work is to engage with the public, however I did observe higher levels of anxiety to engage with the work than with subsequent installations involving multiple users.

I have mapped my observations of participant interaction onto the framework that I developed for open interactive systems on urban screens, informed by Hans Scheuerl's definition of games that include:

- (i) "Freedom" no goal outside it's self
- (ii) "Infinitude" with no preconceived ending
- (iii) Restricted by rules or "closeness of the game"
- (iv) "Ambivalence" movement between rule and chance
- (v) "Virtuality" separate from "real life" and the self (Scheuerl, H. 1965 p607)

The installation aligned with the criteria for “*Freedom*”, in that people played through personal choice. Sometimes people were initially shy to play, and needed some encouragement from the mentors, but this was about confidence rather than free will. Once playing, however the freedom of the participant was restricted by a series of choices offered through the interface. The outcome of play was not certain, the interface was a closed interactive piece in that it was predefined and pre-programmed, however, people could explore as they wished, no two users explored the space in the same order, and the participant performance within the space was unique, and was able to develop a narrative in terms of their interactions both with the public space and with those outside the frame.

This piece is a closed system so does not align to the category of “no preconceived ending”. The installation had a defined set of tasks and ultimate goal; however there were no prerequisite levels or stages, so the journey to the end and the moment that the participant stopped engaging with the work was also open to user choice. Each participant created an individual narrative as they negotiated the space, often there was discussion between the user and the public, where directions were suggested, or elements pointed out, such as to help with finding fairy tale references. However there was limited opportunity for the user to add to the content on screen, traversing the environment, finding hidden surprises such as a shawl and an axe in a cupboard inside one of the huts, it was only when they found the hut with the video environment that the user confronted their own image on screen within the shopping square. At that point others could enter the screen, the users could also include props and free physical representation of the self. Until that point the user is embodied by a puppet-like avatar, which further restricts representation of the self, particularly because it was only the x-y co-ordinates that interfaced with the motion tracking, and not movement of limbs, which would have offered more freedom of expression. There were limitations to levels of “closeness of the game” and “ambivalence”, opportunity to move between rule and chance, again, the user is restricted by the motion tracking coding, which limited the opportunity for the unexpected, however as the participant engaged with the public watching different narratives taking place, often people tried to help the participant solve a problem, choose where to go or to note fairy tale references. Once in the video hut opportunity for the unexpected expanded because the user and companions could engage with their own body image, with the freedom this offers in terms of communicating to others through body language, gestures and props. This installation uses the language of “virtuality” as a virtual forest retreat embedded in

place, with recognizable elements from the physical environment such as the flower stall and the hamburger van, in order to help the users to connect to the screen, however the urban environment was superimposed by an idyllic rural retreat in which the user could explore shared narratives and fables relating to the forest. With physical representation on the screen as an avatar, the ultimate goal was to find oneself within Clayton Square on screen, this work is a mixed reality environment, which travels between real and virtual space concurrently. The levels of sensitivity of the motion tracking at times however broke the participants immersion within the space, bringing the participant back to the real world and awareness of the self along with possible inhibitions. This software has huge potential as a tool for play in public spaces, and could be used both for education, way finding or social cohesion, however I believe that the software limitations at the moment restrict this potential and further development is needed.

The work created a public event in Liverpool that day that will stay in the memory of those participating as well as those observing the scene. It resulted in social engagement that would otherwise not have taken place as people problem solved the interactions with narrative between the participators and audience, often engaging with people that they would otherwise not have spoken to, and would have merely walked past in the street.

## 4.2 “Picnic on the Screen” BBC Village Screen Glastonbury 2009

<http://charlottegould.org> -Website documenting Urban Screen installations

<https://vimeo.com/user9031870> -Vimeo site featuring line out and documentary videos



Figure 2 “Picnic on the Screen” Participants engaging with the environment and animations, June 2009, © Gould C. Sermon, P.

This project is an interactive ludic interface installation that was site-specifically developed for the ‘Village Screen’ at Glastonbury 2009 in collaboration with Paul Sermon. This was part of a BBC Big Screens research project for the Cultural Olympiad to develop a remit through examples and experiments for public engagement as part of their investment in the twenty-two screens, which had been erected across the country. Paul Sermon and myself had not previously worked together, but we had both developed big screen projects. I was invited to submit a proposal as a result of “Ludic Second Life Narrative”. Bren Callaghan the BBC Big Screens curator invited me to submit a joint proposal with Paul Sermon to explore the potential for interactive works to engage the audience on large urban screens. The location of the screen was very central and could be seen from three of the main artery roads including that to the Pyramid stage, so the works were able to draw a wide audience.

Through this research project I aimed to explore how artworks for urban screens can promote sociability through play, offering opportunities to connect communities and alternative ways of engaging within the urban environment, providing a dramaturgy from which audiences can have agency to co-create. This site-specific installation further contributes to a body of knowledge around ludic play (the subject of ISEA 2008) and was developed as a unique open-ended interactive work to provide a platform for the public to engage on large urban screens through play. “Picnic on the Screen” consisted of two blue picnic blankets in front of the Village Screen. The audience groups sitting on these blankets were captured on camera and brought together through a system of live Chroma-keying, and were placed on a computer-illustrated background, with computer animated characters, integrated within the installation system. I aimed to place the two blankets as far apart as possible to encourage the audience to explore the telepresent communication. When the audience participant discovered their image on screen they immediately entered the telepresent space; watching a live image of themselves, sitting on picnic rug next to another person. They soon started to explore the space and interact with others, and with the animated characters and props within the illustrated enchanted picnic scene. (*fig 25*)

‘Picnic on the Screen’ was designed for large format public video screens and explored their creative and cultural potential. It offered an opportunity to be involved in the development of innovative ways of engaging with the public in a festival context using digital technology. Through the augmentation of the virtual and the real, users could explore alternative telepresent spaces and develop unique playful narrative events. ‘Picnic on the Screen’ explored social play and the way that digital technologies can enhance fun and enjoyment. Through the development of the installation I aimed to explore ways that we can enhance new media content and technologies through design, creative development and everyday use and explore opportunities to offer pleasure or fun, an area identified by Nadarajan Gunalan in the ISEA08 proceedings as in need of research. (Gunalan, N. ISEA 08 Conference Proceedings)

For “Picnic on the Screen” I created an environment with characters and props in order to enhance audience engagement, testing my methods over the four days that the piece ran by continuing to develop the animations. The environment was exaggerated and otherworldly,

with heightened colours and strange animated characters. I created props from discarded waste to enhance the dramaturgy but also to explore the potential for using props and animated elements to bring the audience into the narrative on screen, turning the cameras from the spectacle of the festival on to the audience aiming to offer the opportunity for the audience to become both collaborator and subject on the large urban screen.

This site-specific project was in keeping with the Glastonbury atmosphere. There was a sense of disorientation as the participant sat on the picnic mat and found themselves transported into an alternative environment on screen, next to another person or animated character and within an idyllic picnic setting; a stylized, illustrated backdrop. When interviewed many of the participants described the experience as ‘strange’ and ‘mystifying’, again in keeping with the festival spirit.

People of all ages engaged with the piece, and often learned from each other how to make the most of the installations. There was an initial assumption from some of the content programmers, that children would be particularly drawn to the work but people of all ages took part. Each time we set up the project it took a few minutes for people to build up the confidence, or perhaps to feel reassured that it was ok to enter the frame. The adults appeared to be seeking validation from other adults to reassure them that this was socially acceptable. By mid-day the crowd engaged with confidence and people interacted with each other and played out narratives with good humour. One participant said, *“It’s a great concept, gets everyone together.”*

The levels of engagement were such that crowd control was a consideration, in part because of the relaxed nature of the event. The avoidance of antisocial behavior on the screens is an issue with which the BBC were concerned, because of public liability, and I detected some nervousness from the curators at times because the crowd were given total freedom and a public platform and coupled with the energy of the festival audience it was impossible to preempt what they might do next. The organisers planned to switch off the screens if unwanted behaviour started to ensue.

My primary method of research was through constant observation, both at the event and subsequently through observation of the line out video recordings. The piece worked best when there were five or less people on each mat, that way the environments and

participants were clearly visible and people could position themselves to interact with each other effectively. I experimented with managing the number of people on the mat or giving people free reign to organise themselves. At times it got very busy, and I tested the idea of engaging with the audience to see how they might engage, then standing back to observe, documenting the interactions. Most of the time the audience would understand the piece immediately and engage with each other in a playful way, but at times some would effectively use the piece as a mirror and passively observe themselves. This passed quite quickly as others joined participants on the mat and moved the narrative forward.

Through my research I was able to document how the personality of the audience changed with the environmental factors and the audience at Glastonbury is likely to be quite unique. The bands or other events happening on the screen, for example the live screening of the international rugby match, influenced the people and the mood of those who were congregating and this had to be taken into consideration when programming the piece. The Rugby crowd was hedonistic and exuberant, leaving debris on the floor; this made it difficult to run the installation as the crowd were unpredictable and it also had practical implications because we were unable to set up the installation without crowd control and cleaning of the site. This was something that the Big Screen organisers learnt early in the week. Initially they were quite relaxed about the time slots of each artists work, but it became apparent that the events around the screen had a significant effect on the audience as well as environmental factors. After the live screening of the international rugby match the ground was strewn with litter, was very boggy and with a surging crowd, the organisers rescheduled the piece for another timeslot, instead scheduling a karaoke game, which they thought more conducive to a highly charged, hyper crowd.

I found that working with the group of artists at Camp Pilton offered further valuable insight. There were eight other artists, who were also working to develop concepts, which were at different stages of completion and this enabled us to reflect on our own and other's practice. The duration of the project over four days allowed further experimentation and testing of ideas and techniques. This project was a site-specific work that aimed to respond to the environment such as atmosphere, weather and participants who continued to influence ideas. During the week I introduced props made from discarded junk found on site, making this practice-based research a work in progress.

Through this project I was able to test ideas on how interactive artworks can optimise agency, by offering an interface to which the audience can make an active contribution. The interactions are filmed from the screen and the audience response is recorded with interviews as further evidence. The lineout videos form the key element of my research method, as this is the actual view that the audience has while engaging with the work. Every nuance, instance, interaction and expression is therefore captured and is used as data. This is almost like looking to the mind's eye of the participant. Since the project I have been able to test the outcomes against the data-mapping framework to assess the openness and closed-ness of the work, adapting Hans Scheuerl's criteria for games, which include:

- (i) "Freedom" no goal outside it's self
- (ii) "Infinitude" with no preconceived ending,
- (iii) Restricted by rules or "closeness of the game"
- (iv) "Ambivalence", movement between rule and chance
- (v) "Virtuality", separate from "real life" and the self. (*Scheuerl, H. 1965 p607*)

Through my research I mapped key moments in the installation against this framework using the time code from the line out videos, against each of the criteria. "Freedom of choice" includes a number of moments of impromptu dancing, a woman turned with her back to the camera (frame 16:50), contesting an implied rule that the audience observe themselves and each other on the screen, evidencing opportunities for breaking of rules or conventions. In this way the participant subverted the installation by looking only at others on the mat, negating the virtual, the view of others on the remote picnic rug, as well as the alternative environment, participating only with the real. Another boy played with his own hat, using the hat as prop or puppet, mimicking the actions of other participants who are playing telematically. Moments of "Infinitude" or opportunity for the unexpected, included a woman putting a teacup on her head, another woman drank from an oversized cardboard cutout, flouting rules of conventionality around expectations of behaviour in terms of demographics, in this case age. The woman knew that she cannot drink from a two dimensional cardboard cup, but played at drinking, thereby escaping into a world of make-believe and mimicry. Evidence of "closeness of the game", referencing the rules or parameters set, was observed by a virtual man and a woman who both reached for the cardboard cut out of a teapot, playing with the language of the installation, as if inhabiting a footnote. (Frame13: 32) A boy created a Chroma-key hole in his stomach. A man played

with a glove puppet. (Frame: 4:03) Moments of “infinite” include a man and woman on remote sites dancing with each other. These acts happened quite spontaneously with no preconceived plan as to how the sequence might end, the events were triggered by the actions of another participant some ludic, using props in an unconventional way, or engaging in activities that would be socially unacceptable or strange in an every day situation. Often people engaged with each other when they would otherwise ignore each other’s presence. This form of game playing would fall into the category of “paidia” (involving characteristics of “diversion, turbulence, free improvisation, and carefree gaiety”. (Caillois, R. 1958) It is apparent from the time code that one participant’s actions can trigger responses from others so within adjacent frames, but separately visitors tried to catch the birds, first two girls (frame 19:29), and three seconds later a man reached as if to catch a bird (frame 19:32). A woman gestured to take a piece of cake (frame 2:00) and thirty eight seconds later another woman gestured to take a piece of cake (frame 14:38). In another sequence two women on remote sites engaged in gestural conversation in this way developing an impromptu narrative sequence.

Initially at the beginning of each presentation of the piece, people tended to sit on the mat and look at themselves, taking photos, and appeared to take great delight in this. In frame 109 people started to gather, wave and look at the spectacle. A row of women in their twenties sat for some minutes watching the spectacle behind them, passively observing, laughing and enjoying the experience but not actively engaging in the work as if in a cinema (frame 700). The cardboard props worked effectively to build confidence to engage with the work, a woman entered the frame, and immediately picked up the props and started to play (frame 17:29). The props appeared to help connect the audience to the screen and acted as a signal for play. This was reaffirmed by the blue screens which further signified the idea that the audience are removed from everyday life, represented in the open/closed framework as “virtuality” separate from life and the self and therefore they were given the signal that play was socially acceptable. The symbolism of the picnic also worked effectively at Glastonbury because it fitted seamlessly into the environment, so much so that people were able to enter the frame, consuming their own food and drinks (frames 621 and 14:38). The participants tended to be passive in this circumstance, watching the spectacle, but uninhibited to engage with the work. The size of audience and the freedom of movement into and out of the installation reduced the sense of a dynamic between an audience as the observer and the participant as observed. This appeared to

reduce inhibition, brought about when participants feel watched. Roy Ascot argues that passive observers or audience should be removed from interactive works in order to limit inhibition, so that those taking part are equally and actively involved. People of all ages engaged with the work including a Glastonbury veteran, who, on entering the frame, immediately started to engage with others on the remote site (frame 11:46). The fact that actual touch is not involved appeared to liberate people in terms of observations of personal boundaries, so that people were much more likely to be physical with strangers, aware that they were unlikely to ever meet, and that physical touch does not encroach on personal space.

The animations were on a time line; I had originally hoped that the augmented reality tags would have been working for this event, however, the cardboard props worked well. There were no complicated game play rules or strategies that needed to be explained which meant that the method of interaction was intuitive, inline with Csikszentmihalyi's flow theory, people engaged with play because a harmonious balance of ease of access or ability to complete the task and challenge existed. (Csikszentmihalyi 1975, 1995) The intuitive interface, the fact that there were no complicated rules or instructions, encouraged people to want to engage and prevented inhibition. The graphical interface and animations also attracted people to want to engage with the screen. The nature of event, also created an environment that encouraged and signaled that it was socially acceptable to play, as a festival, separate from everyday life, encouraging role play and mimicry, with elements of the ludic or "phantasmagoria" (Sutton-Smith B. 1985) encapsulated by a group of people dressed as bees who arrived on to the mat. The picnic theme as playful and fun was key to the concept development, as the "feast", as defined by Huizinga is a form of play, where "mirth and joy dominate". (Huizinga, J. 1934)

I was aware that "Picnic on the Screen" had enormous potential to be developed for different environments and audiences and I identified this as a further opportunity to test ideas and experiment with the interface as well as the dynamism of the animation as a prop. At this stage the animation had been linear but I wanted to explore the potential of augmented reality so that the audience could also control the animation.

### 4.3 “Shangpool Picnic” Liverpool Biennial, Shanghai 2010

<http://charlottegould.org> -Website documenting Urban Screen installations

<https://vimeo.com/user9031870> -Vimeo site featuring line out and documentary videos



Figure 3 “Shangpool Picnic” participants in Shanghai and Liverpool interact with animations, October 2010, © Gould, C. Sermon, P.

Following the success of “Picnic on the Screen” presented at the Glastonbury Festival Paul Sermon and myself were invited to develop a new version of this interactive public video installation for the “Liverpool Biennial”. “Shangpool Picnic” was designed to connect people in the Folk Art Museum, Shanghai with the “Bluecoat Gallery”, Liverpool in a shared banquet, whilst exploring a virtual arcadia modelled in “OpenSim” of Liverpool’s refurbished Victorian Stanley Park. “Open Simulator” is an open source multi-platform, multi-user three-Dimensional application server. It can be used to create a virtual environment (or world), which can be accessed through a variety of clients, on multiple protocols. It also has an optional facility (the Hypergrid) to allow users to visit other “Open Simulator” installations across the web from an account on a 'home' “Open Simulator” installation. “Open Simulator” allows virtual world developers to customize their worlds using the technologies they feel work best. This was to be developed as a site-specific work

and included further technical developments to explore the potential of augmented reality so that the audience can control the animations.

Shang-Pool Arcadia was a collaborative research project between Liverpool John Moores, Salford and Shanghai Universities in partnership with Liverpool Biennial 2010. Using virtual and mixed realities, it explored the notion of the idyll and green spaces in the city for recreation, contemplation, nourishment and meeting and in this way tapped into shared cultural references and practices such as the sharing of food at the picnic.

Shangpool Picnic was a development from “Picnic on the Screen”, utilising the latest blue screen and HD videoconferencing technology the installation brought public participants together within a shared telepresent urban picnic scene. This piece merged live camera views of remote audiences and placed them within a shared picnic environment, together with computer animated elements that were triggered and controlled by the audience using augmented reality tags. The environment and animations represented recognizable cultural references for both locations reflecting a shared history and offering a platform from which the audience could co-create.

Through “Urban Picnic” I explored ways that digital media can offer new opportunities to engage communities through urban screens in public spaces offering a diverse public representation. I investigated the role that artists can play in connecting communities and celebrate cultural distinctiveness, looking at how interactive artworks, can be used to connect people, representing a diversity of worldviews. Further through this piece, I explored how interactive artworks can optimise agency, by offering an interface to which the audience can make an active contribution, investigating the factors that influence the “openness” of the work and the play that takes place. The interactions were filmed from a lineout video, feeding directly from the installation and showing the image that participants saw on screen, recording audience interactions and responses with interviews to support the findings. As part of my research methodology I have mapped outcomes against the “Open/Closed Framework” that I have developed, for interactive works adapting Hans Scheuerl’s criteria for games involving:

- (i) “Freedom”, no goal outside it’s self
- (ii) “Infinitude” with no preconceived ending
- (iii) Restricted by rules or “closeness of the game”

- (iv) “Ambivalence”, movement between rule and chance
- (v) “Virtuality”, separate from “real life” and the self (*Scheuerl, H. 1965 p607*)

Examples of “freedom” and “infinite” include in frame 40:24 a Shanghai woman moved her hand to mimic a bird in flight and in frame 38:16, two participants one from Shanghai another from Liverpool moved into a tai-chi position together. The remote nature of the installations appeared to open up opportunities around entering each other’s personal space and participants were not inhibited to appear to touch each other. The environment of the installation further reinforced this, the Shanghai work was based in a university gallery and so many of the Shanghai audience were well acquainted. This meant they were relaxed in the space, taking on a reclined position on the picnic rug. This appeared to impact on the Liverpool audience who were then open in their approach to those in Shanghai. In frame 49:31 a Shanghai participant gestured to eat a Liverpool visitor, in frame 29:56 a man in Shanghai lay on the rug, and a participant in Liverpool gestured to tickle him, another from Liverpool pushed his foot. A Shanghai participant entered the frame and two Shanghai participants pushed him with their feet. In frame 42:17 a boy entered the frame and rolled over a Shanghai participant. The Shanghai participant then did the same to the boy from Liverpool. There are examples of flexibility with the rules, as well as “freedom” when participants brought their own props, thereby influencing the narrative and play. In frame 34:35 a game of ball began when Shanghai participants rolled a ball to each other, the other Shanghai participant gestured as if the ball was not there, a Liverpool visitor, then joined in and the Shanghai participant rolled the ball from outside the frame as if the Liverpool participant had the ball. When a new participant in Liverpool entered the frame the Shanghai man passed her the ball (frame 37:06). In this way the ball was used as a way to connect the audience and break down barriers of shyness and physical constraints. There were many occasions when participants gestured to each other in order to communicate and a sequence emerged, one gesture leading to another, starting in frame 37:19 participants in Liverpool and Shanghai signaled victory and thumbs up gestures to each other, participants in Shanghai and Liverpool made heart hand gestures to each other, then a body popping wave with their arms and a hand puppet character with their hands, (this pre-empts the meditative pose described above). By frame 38:28 the same participants copied movements rubbing their head and stomach then moved their arms together in a dance and completed the sequence with a bow in unison, then a wave. Initially visitors behaved in a manner that was “close to the game”, not straying far from the framework

that I had offered through the interface. The animations appeared to ease introduction to the work, the interaction was intrinsic, there were no barriers in terms of technical prowess or ability and the interface attracted people to want to play providing a balance between motivation and ability to engage. (Csikszentmihalyi, M. 1975, 1997) In this way the augmented reality tags offered a way into the work and reduced inhibition, each time new audience members entered the frame they immediately picked up an animation. In frame 2:39 participants held up a lucky cat, steam boat and football, they waved intermittently, in frame 2:20 Liverpool participants joined the scene, all waved and held up a panda and football. In frame 1:57 Shanghai participants held up a character each- a bird, tower and liver bird, in frame 1:27 a Liverpool man entered the frame and held up a Liverpool football, in frame 1:00 a Liverpool woman played with a panda and a Shanghai woman played with a toy dog. In frame 0:45 a Liverpool woman played with a butterfly, a Shanghai woman played with a soldier, in Frame 0:26 a Liverpool woman in her 20s entered the frame, a Shanghai woman also in her 20s waved back. This polite initial exploration of the installation was then interrupted by a group of Shanghai students who, in a flash mob style, ran into the frame together and sat in the spaces (frame 3:26) in frame 3:53 a Shanghai participant waved fingers behind the head of a Liverpool participant. In frame 3:35 Liverpool participants (teenagers) covered up the Shanghai participants with their hands and jackets, in frame 3:56 Shanghai participants suddenly ran out of view at the same time. The Liverpool boys picked up the animations again. This intervention is an example of a playful response with friendly provocation between a group of similarly aged participants in Liverpool and Shanghai, again a result of groups of visitors who were already well acquainted on one site, planning ways to make a difference to the narrative. This is an example of “virtuality” it has no significance outside of the work, the Shanghai participants visibly enjoyed disrupting the passivity of the scene and inline with Csikszentmihalyi’s flow theory (Csikszentmihalyi, 1975, 1997), appeared to be caught in the moment, unaware of external factors. People played with the animations but this tended to be fairly passive, stroking a panda, holding a butterfly as if it was fluttering around the scene. When playing with the animation less interaction between audience members took place, so that when in frame 2:25 a Liverpool participant placed the Buddha animation on the rug next to the Shanghai participants, the Shanghai participants did not respond. The animations, however offered continuity in terms of keeping audiences engaged and in the frame, if unsure for example when a participant on the remote side left the space, the audience would usually revert back to picking up an animation. The narratives formed

when people brought their own props, were richer in terms of levels of active audience engagement. The props also meant that people could contribute their own narratives, directing the plot in a proactive way, for example, in frame 10:09 a Shanghai man held up a cup of water, and a Liverpool woman toasted with a cup of tea, in frame 10:18 more Shanghai participants held up cups, in frame 10:27 Shanghai and Liverpool participants gestured to pass each other drinks, the sequence finished with a wave from visitors between Liverpool and Shanghai. There was another sequence involving a ball, which again demonstrated high levels of interaction between participants across the two locations. In frame 5:55 a woman from Shanghai (20s) touched a ball on the mat, in frame 5:56 a Liverpool man gestured to kick the ball, in frame 6:00, a Shanghai man took the ball away and put it back in front of the Liverpool man. In frame 6:01 a Liverpool man tried to take the ball and in frame 6:07 a Liverpool woman (in her 20s) crawled in to the frame to gesture as if to take the ball. In frame 6:10 a Shanghai woman (in her 20s) grabbed the ball and moved it approximately ten centimeters then put the ball down again. In frame 6:10 a Liverpool woman moved to cover the ball, a Shanghai man snatched it away again. This continued for a while until a Shanghai participant sat back on the mat and gestured for someone from Liverpool to play. In another sequence with a ball, in frame 12:58 a Liverpool participant pretended to pick up the ball using a prop, while covering the screen image of the ball in Shanghai. In frame 13:00 a Shanghai participant tried to grab the prop, in frame 13:47 a Shanghai participant threw the ball in the air, another tried to catch it. In frame 15:15 a Shanghai participant held up the ball, while another gestured to bite it.

This research has provided evidence to suggest that key factors in developing open systems involve flexibility within the parameters of an artwork allowing the audience to take the narrative in an unexpected direction, and their actions can impact on each other and change the end result. This is supported by Michel de Certeau who found that the public apply “user tactics”, re-appropriating design and culture so that actual use of products often differ from intended design. (De Certeau, M. 1984) One of the examples of this is the way that the audience effectively communicated with each other through gesture to circumvent language barriers, for example the tai-chi exercise outlined above. Also the use of their own props, for example participants played with an orange, simulating the pushing of an orange between participants in Shanghai and Liverpool to great hilarity as the Shanghai partners faked the push back of the orange from Liverpool. Initially people would move into the frame and look at their mirror image holding up the animations passively engaged

in the “spectacle”. (Debord, G 1995) This, however potentially offered a way into the installation, as a mechanism for confidence building. Drawing people in through the animations and as they became more confident, to interact with the environment on screen. The animations were designed to be low-fi, using only a few frames, this was a technical requirement, but also aimed to limit the spectacle, offering the stage to the participants. It also aimed to signify to the audience that they were free to play, that this was a space that existed outside of real life and separate from the self. The aim of the augmented reality tags (triggering the animations) was to facilitate a change in the relationship between audience and artist, shifting the role of the audience to the role of producer (Benjamin, W. 1978) so that the participant becomes proactive within the production of the work, giving the audience control over the animations so that they could weave them into the plot as they chose. The physical scale of the tags as well as their “mystery-meet” quality (the user could not tell what the animation was) may have encouraged a motivation to find out what each code comprised of, and this prompted passive observation rather than active engagement. The interaction however was intuitive and people would interact and play with each other and the animations. There were visible stages of understanding as the audience engaged with the installation, initially a participant would sit on the mat, on observation, an understanding of the space would slowly visibly dawn on them that the person sitting next to them on screen, was not in the physical space. Then they would start interacting with the virtual participant and environment.

People of all ages engaged with the piece, and often learned from each other how to make the most of the installations. A range of visitors took part, in Shanghai the project was exhibited at the university gallery, so large numbers of students were present, many of whom knew each other, from Liverpool different cultures and nationalities were represented, including a French visitor who on leaving in frame 22:50 said “was just a pleasure to see you”. When new groups of people arrived at the installation it took a few minutes for people to build up the confidence, or perhaps feel reassured that it was ok to go on to the picnic mat, often encouraging children to try first. This may be because adults are rarely encouraged to play and they needed validation from other adults to reassure them that this was socially acceptable.

#### 4.4 “Urban Intersections” Waterfront Plaza, Belfast ISEA2009

<http://charlottegould.org> -Website documenting Urban Screen installations



Figure 4 “Urban Intersections” barbeque, 26th to 29<sup>th</sup> August 2009, © Gould, C. Sermon, P.

Through this public installation I explore how interactive works can offer a framework, which encourages the audience to play, potentially opening up discourses around issues within communities and in which the audience can represent themselves, encouraging a broad demographic to represent a diverse worldview in this case between distinct communities in Belfast and international conference visitors. This piece aims to contribute to a body of knowledge around artworks within the public space, which engage communities through play, “...*raising awareness, drawing attention, dissipating preconceptions and questioning conventions, opening dialogue around issues.*” (Lippard, L. 1997, p19)

For this research project I created a DIY urban screen in a public open space, ideally located to attract a broad demographic to engage in the artwork. The Screen consisted of a large-scale white plastic unprinted billboard screen, where usually advertising hoardings were hung, and this was the projection screen. The installation was exhibited at night, and a large-scale projector on a small crane was wheeled out each evening for presentation. The DIY nature of this screen was an implicit aspect of the artwork because of the implied association with murals, as a DIY interventionist art form. I was able to undertake a

scoping visit as part of my research methodology to create a site-specific work, investigating the areas affected by the troubles in Belfast and the developments in the city since, in order to borrow from the existing language of the murals, unique to a highly charged political and historical culture, used by both sides throughout the troubles.

I worked with Paul Sermon to build the environment in “Open Simulator” (*see fig 4*) [http://opensimulator.org/wiki/Main\\_Page](http://opensimulator.org/wiki/Main_Page) and this space referenced the first life (physical) environment, so that the public could connect to the screen, but with improvisations that reflected the language and environment of the murals. My work was programmed through four evenings with three artists’ works, Paul Sermon, Peter Appleton and myself. Each of the artists created a distinct work, located within the landscape. I worked with an industry partner, “Second Places” <http://www.secondplaces.net/opencms/opencms/> to develop a unique motion sensing capability within the software that tracked the audience so that the user could become the interface which moved the avatar through the “OpenSim” space. The installation referenced the concept of the garden with the cultural resonance that this space offers for community engagement but also for the potential disputes over boundaries.

The work was presented at night as we were projecting the image, the audience of two hundred, ranged from specialists in interactive media, artists and curators from the festival to locals passing through the public square and virtual visitors, bringing together communities that would otherwise not interact.

“Urban Intersections” is an interactive installation for urban screens that investigates new forms of social and or political narratives in site-specific urban environments. Through this research project I explore the impact of interactive works for urban screens on our communities and our environment and evaluate how these works can contribute to a sense of citizenship, in our globally networked, multi-ethnic cities. Through my research I investigate how we can offer a framework to promote public engagement and interaction and the opportunity to contribute to cultural content.<sup>1</sup>

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<sup>1</sup> With the development of social networking, any discussion about community must also include virtual online spaces. I have developed a number of interactive installations using “Second Life” that focus on the interaction and exchange between online and offline identities through social practices, such as performance, narrative, embodiment, activism, place, and identity construction.

“Urban Intersections” focused on contested virtual spaces that mirror the social and political history of Belfast as a divided city, and was presented at “ISEA09” (“International Symposium of Electronic Arts 2009”). This project specifically reflected on the ironies of contested spaces, and stereotypes in multi-user virtual environments, exposing an absurd online world that consists of perimeter fences, public surveillance, and national identity. The installation was located on the regenerated landscape of the Waterfront Plaza Belfast, directly outside the newly developed concert hall building. This utilitarian environment, without boundaries and territories, resembled a virtual plaza encapsulated by the ironies, contradictions, and obscurities of a divided city, and a metaphor of Belfast’s social history. This social tapestry formed the central focus of the installation and referenced the infamous painted murals on the gable ends of houses across West Belfast on the Falls Road or the Shankhill Estate. The installation was a collaborative work between three artists, each of us producing a separate piece of work, staged within the environment that I had created with Paul Sermon in “OpenSim” which referenced both the environment of the Waterfront Hall building and the aesthetics and location of the murals.

Paul Sermon’s piece combined first life visitors and Second Life avatars within the same live video stream. By constructing a blue Chroma-key studio in Second Life, it was possible to mix live video images of online avatars with the audience in Belfast, enabling these participants to play and converse on a collaborative video stream simultaneously displayed in both first and Second Life situations. Sound and media artist, Peter Appleton developed the third interface and his contribution included a barbecue on the Waterfront plaza that simultaneously controlled the conditions of an identical Second Life barbecue. Through a series of light and heat sensors, it was possible to relay commands to the online situation, so that when the first life barbecue was ignited so too was the Second Life barbecue and as food started to cook and brown so did its online duplicate. All these interfaces referred to the domestic garden and the infamous Belfast perimeter fences and aimed to break down these boundaries through social interaction that prevailed, be it through a video portal, a didactic maze or over a grilled sausage.

I worked with programmer Alasdair Swenson to develop a unique motion-tracking interface, which allowed visitors in Belfast to wear a large puppet-like copy of my avatar head. Covered in an array of LED lights that were tracked. Participants could then control the movements of the Second Life avatar as a means of alternative navigation through a

maze of chain-link garden fences. The head was made from papier-mâché and similarly I built a low-fi version of the head in “Second Life” as well as simple body parts, which I placed on top of the avatar. In this way I aimed to divert attention from the “body beautiful” aesthetic, which prevails in Second Life. The mask-head also acted as a device to connect the participants to the screen and one of the visitors remarked that the use of props such as the head successfully achieved that aim, helping to immerse the participant in the environment, connecting the user to the screen and did so literally as the first life body became the interface to the second life avatar. This supports Patrick Allen’s assertion that a focus upon the body in virtual space helps us to locate ourselves in that space (Allen, P. 2008) the body can help us access the screen as a portal between the real and the virtual.



*Figure 5 “Urban Intersections” from left to right paper-mâché head, Figure 6 participant wearing the head, Figure 7 “Urban Intersections” barbeque, 26th to 29th August 2009, © Gould, C. Sermon, P. Appleton, P.*

My methodology for this installation was continuous observation, video documentation, as well as open interviews. It was interesting that one of the Belfast visitors said that the culture of the curfew was still prevalent and this area was notoriously quiet at night except for some groups of youths who participated with unbridled enthusiasm. Their arrival on the scene prompted a quick response from security guards, who were able to manage the young people with a light-hearted banter and at the same time reaffirm their authority over the situation and facilitating them to interact appropriately. This also brings about questions around the audience, whether there is an undesirable and desirable audience, what the parameters are on this and who makes the decisions? In this case study, it was the security guards at the Waterfront Building who were employed to protect the facilities as well as the other members of the audience, who managed the situation so that it remained amicable.

The installation that I developed was designed for a single user, which meant that the player had an audience; also the head that participants wore may have inhibited some

people, although the nature of the ISEA audience was such that there was always a willing participant during the showing of the work. The interactivity was intuitive, using the body for motion tracking. However, the programming was not as responsive as I would have liked and there was a delay, so that users had to move quite slowly through the work or pause so that the avatar could catch up.

“Urban Intersections” was commissioned by ISEA and the University of Ulster with support from the Waterfront Hall Belfast. This is a large bi-annual international festival, which attracts a regular global audience of academics and media artists so this had a considerable impact on the nature of participants. There had been little advertising to attract a local audience outside the university, so most of the local participants were coincidental passers-by. The random nature of this results in participants who are representative of a broad cross-section of society, a large portion of whom on interview stated that they would not usually visit a traditional art gallery but were enthusiastic to get involved and many remarked on how much they enjoyed the experience. The use of the large urban screen and the virtual environment signifies the idea of a game and passers-by often enquired as to which game engine we are using. People also identify gaming as a socially acceptable form of adult play and so in varying degrees are interested in getting involved or watching others interact with the piece. In this way, the lines of communication are opened up and the audience engage both with their environment and with total strangers who they may not have otherwise met.

The design of public meeting places is an important consideration for urban planners when developing new urban areas as well as consideration of spaces where cultural events can take place. Urban spaces left vacant or disused can lead to crime, which can lead to public fear and further avoidance. This suggests that it is as much a consideration for modern urban designers to employ the use of lighting to counter crime, as the development of cultural spaces, breathing life into a place and developing a sense of community. Mirjam Struppek warns that “place-making” through a process of gentrification can have negative repercussions on existing communities, moving them into the outskirts and away from the upwardly socially mobile areas and has identified a number of proposed permanent screens that met with resistance within communities out of fear of an area becoming upwardly socially mobile. (Struppek, M. 2006) The Waterfront Building was already part of this process of gentrification and the screen that we were erecting was not permanent, but

brought cultural activity to that space, important to attracting visitors and building new memories of place. As Lucy Lippard contends, “*Space defines landscape, where space combined with memory defines place*”. (Lippard, L. 1997, p9) In this way cultural activities can build a sense of place, which reinvents and layers as the community develops. Lucy Lippard describes place as a hybrid, which is constantly evolving as we engage with that space. (Lippard, L. 1997, p6) At the project planning stage of “Urban Intersections,” it was evident that the Waterfront Building programmers, as well as neighbouring hoteliers, were very keen to support the project. They are used to seeing visitors to the music events held in the concert hall but not in the square outside. There is a good argument for making permanent screens part of the infrastructure of new public buildings as the programming of outdoors events can bring new audiences into that space, creating a sense of place and drawing in life and activity and thereby “adding value” as described by Audrey Yue. (Yue, A. 2009 p264) This is particularly pertinent in a location such as Belfast, which is undergoing a slow process of healing and looking forward to a process of metamorphosis after many years of struggle.

Works such as “Urban Intersections” potentially facilitate the community to reflect on social and political issues and on the history of Belfast, but also bring an international audience to the city, offering an external perspective. The audience were invited into a virtual garden superimposed on the space with all of the contradictions that the garden offers as a place to share a barbeque with neighbours and friends but also with fences and gates and the potential restrictions and disputes that can arise. The murals from both political sides remain in Belfast as a historical reminder of the past troubles and a keeper of the peace. “Urban Intersections” represented a life size interactive mural on the building, into which the audience could enter, in the form of an avatar, and this aimed to encourage further reflection reinforcing a pride in the progress made and offering a framework which Richard Sennett argues, is essential to enhance social engagement. (Sennett, R. 2002)

My work for this piece was a closed work, as it was pre-programmed and the audience were confined in terms of movement around the space. I have mapped the outcomes against Hans Scheuerl’s criteria for games under the following headings:

- (i) “Freedom”, no goal outside it’s self
- (ii) “Infinitude” with no preconceived ending
- (iii) Restricted by rules or “closeness of the game”

- (iv) “Ambivalence”, movement between rule and chance
- (v) “Virtuality”, separate from “real life” and the self. (*Scheuerl, H. 1965 p607*)

“Urban Intersections” fit within the criteria, of “freedom”, however, while the user could orientate around the space as they wished they were restricted by the parameters of the virtual world. The work represented an activity that had no goal outside it’s self and was in this way separate from real life and the self. The use of “OpenSim” as opposed to “Second Life” meant that I could set the avatar up with my name, and the nametag “Charlotte Gould” floated above the avatar, so in effect other participants had the opportunity to become my avatar, or control my avatar as a puppet, thereby in effect, taking on an alternative identity. In terms of the second criteria, of “infinite” there were a number of choices available for the user through their interaction with the space, but there was a goal to reach the shed in the garden though a maze created by fences and garden furniture, which highlights that this is a closed system with a preconceived ending. The installation was governed by rules, so was in keeping with the third criteria of “closeness of the game” as the programming determined the movement of the avatar, tracked by the body. Opportunities for “movement between rule and chance” were limited by the levels of responsiveness of the programming, which impacted on opportunities for audience free play or breaking the boundaries, as the focus tended to be on keeping the motion tracking in line with the avatar. This meant that the fourth criteria of opportunity for “ambivalence”, was also impeded. In line with Mihaly Csikszentmihalyi’s theory, play was inhibited through the difficult nature of the task, levels of play and unexpected actions of participants or playfulness, would have been enhanced if the motion tracking had been simpler to use. It was baffling to audiences sometimes, purely because of the lag involved. However participants did become lost in the game, immersed in the task and ignored the world outside. (Csikszentmihalyi, M. 1971) In effect the participants became puppeteer and the avatar the puppet. If movement had been more immediate this would have freed the user up for free play and invention, as while there was a single user in real life, the player could have engaged with avatars from “OpenSim”. This project has great potential in terms of opportunity for play, but was inhibited by software and programming capacity at this point in time. Some of the most advanced programmers in the country from “Second Places” had been working on this, and saw the piece as a possible application for galleries or hospitals, for way-finding or education, if users could navigate themselves around a virtual space using the body this could be hugely beneficial.

The potential in this work was in the opportunity for play in the urban environment, the real benefits in terms of community engagement were in the social event that surrounded the installation, particularly in conjunction with the other works on show, where people could share a barbeque while watching, and engage on screen with the avatars from Second Life. The three works complemented each other encouraging social gathering and discussion. The position of the piece was also interesting in a neutral position on the Waterfront, so that passers by from both communities in Belfast engaged with the work, although as mentioned above, perhaps limited by the culture of the curfew. This work had been developed in “OpenSim”, rather than “Second Life” in order to reduce the time delays on the motion tracking. It meant that avatars had to be invited to the space and participants had to set up a new avatar. The work represents opportunities for different use of “Second Life”, where many users tend to inhabit the space as consumers of leisure, visiting bars and the supermalls. Programmed events like this in “Second Life” can encourage an alternative use of the space, and works such as “Urban Intersections” can be used as a framework for this. This project was a mixed reality piece which merged the virtual and the real and potentially could inform the way we use social spaces in the physical and virtual environments to reinterpret and develop a sense of place.

#### 4.5 “All the World’s a Screen” Manchester, Barcelona 2011

<http://charlottegould.org> -Website documenting Urban Screen installations

<https://vimeo.com/user9031870> -Vimeo site featuring line out and documentary videos



Figure 8 “Mirror on the Screen” Participants in Manchester and Barcelona engage with the virtual environment 28<sup>th</sup> and 29<sup>th</sup> May 2011, © Gould C. Sermon, P.

Hinting at Shakespeare’s assertion that all the world’s a stage in his play “As You Like It” (Shakespeare, W. 1603) this ludic installation entitled “All the World’s a Screen” linked audience members at Hangar Artist Studios, a creative arts and media exhibition space in Poblenou, Barcelona with participants at MadLab, a community arts and science lab in Manchester’s Northern Quarter; attracting the broadest possible audience to encounter an interactive art project occurring in the wider cultural and public context. The work was designed for use on an urban screen but was exhibited across arts centres in Manchester and Barcelona.

Between 4pm and 6pm on the 28th May 2011 the “MadLab” audience in Manchester joined participants at Hangar in Poblenou, bringing a mix of eccentric players, creative interventions and surreal improvised performances in spontaneous interactive moments of

hilarity, emotional exchanges and thought provoking dialogues. Whilst audience members in Barcelona had the opportunity to construct sets and edit scenes, participants at MadLab in Manchester replied with improvised props and costumes to provoke a juxtaposed montage of impromptu performances and dialogues.

Members of the audience in Barcelona were able to decide on the context of this interactive telematic performance by using an iPhone app to select between seven different background sets, which consisted of live webcams scenes and animated environments. The participants in Barcelona could then stand in front of the Chroma-key blue screen and position themselves within these stage sets to join the ‘players’ in Manchester within the dramaturgy of the model set as they journeyed through “The seven stages of man”.

This specific part of the “All the World’s a Screen” offered audiences the opportunity to create the narrative and dramaturgy of the complete installation. “The seven stages of man” consisted of a one-metre square table top 1:25 scale model of a house that included seven ground floor rooms connected by doorways and corridors. The audience were invited to place a hand directly into any of the rooms in the model to arrange the sets and interact with participants. Four of the rooms contained web cams that were connected to a MacBook Pro via a USB hub. Using custom made software built with Quartz Composer the MacBook Pro could display a full screen output from up to seven different video sources, which included the four web cams as well as three QuickTime movie animation files. When a participant pressed a key (one to seven) on an iPhone keyboard App the video output displayed the selected video stream until another key was pressed. This was an offline video display and therefore the video from all sources was uncompressed at full HD resolution. The selected video scene then provided the backdrop to “All the World’s a Screen” telematic performance.

Through this research method I address how artworks function as a catalyst for urban interventions that offer a creative platform for public audience interaction. Working from Scott McQuire’s contention that the divide between leisure and work is converging, with the increasing pervasiveness of mobile devices, social networks and email, our media has become ubiquitous but that digital developments offer opportunity for media to facilitate public engagement. (McQuire, S. 2008, p131) Through this research I look at how playful environments and ludic interfaces offer opportunities for the audience to be creative and

make real choices, to daydream, or to play. Starting from Edward Shankin and Kristine Stiles premise that interactivity per se does not automatically produce works that offer a creative voice, a dynamic role or ‘agency’. (Shankin, E. Stiles, K. 2011, p32) Through “All the World’s a Screen” I aimed to develop an open interactive system that offers real choice or opportunity for creativity using a mixture of animated and physical environments.

The locations and associated communities within which the installation took place were also a key focus of the research, and I was able to investigate how the communities responded and interacted with each other. “All the World’s a Screen” took place in two similar environments, with a comparable history. “Hangar”, is a converted textile mill in Barcelona and “MadLab”, is housed in a building that was previously a retail space in Manchester. This change of use from industrial to creative spaces is a common feature of Manchester and Pobleu. The textiles heritage connection is also why Pobleu is referred to locally as Barcelona’s Manchester. The project linked two unique environments with similar attributes; both were media lab spaces that attract a local artistic community and maintain open access to the public. It was interesting to see these artistic and technical communities as well as their associated audiences engaging with each other, and the way that external influences affected the dynamic of the group. “All the World’s a Screen” was presented at Hangar as part of their open studio season, inviting in local residents to explore and experience artworks and installations from both local and visiting artists. The event also involved live music and coincidentally a screening of the European Championship football final between Barcelona FC and Manchester United, which attracted an unexpected audience and provided further interesting material as artists to present as part of the set and for the audience as a subject for engagement. “All the world’s a Screen” was designed specifically for a studio environment, with its blue screen and model set but could also be presented on an outdoor urban screen. The audience in Barcelona were encouraged to put their hands inside the model and play, move objects and furniture around, having a direct impact on the set itself. Through their playful engagement they were able to develop a filmic montage, edited through the choice of cameras, scenes and action in order to create their own cinematic narrative experience.

An important part of the development process of the piece was our response to the environment in Barcelona in order to inspire the development of the set. In this way we provided a framework from which an audience could engage and develop a narrative,

offering a platform from which the two communities could develop a dialogue. Grant Kester questioned the value of the artist as “expert” imposing their views on communities as patronizing. He argues that communities should be involved in the art works themselves in a proactive way. (Kester G.H. 2004) During the development of this project I undertook a residency at Hangar.org and at MACBA in order to immerse myself in the space and engage with the community, so that this could influence the design of the environments and implied narratives of the set. “All the World’s a Screen”, then, offered a framework from which the audience could literally use their voice, role-play, and proactively create this narrative. Lucy Lippard (Lippard, L.1997, p19) highlights the importance of the role of the artist to raise awareness around issues, to draw attention to dissipate preconceptions, question conventions and open dialogue around issues. She draws attention to the diversity of contemporary communities, with “hybrid” nonlinear stories and in which homogeneity should not be assumed, she argues that “preserved” or catalogued representations can be oversimplified and in this way become stereotyped. However, within a multicultural society it is important to take risks, to speak to specific groups within the whole, to question and probe, to explore ideas and conventions as well as to push boundaries, rather than avoiding issues and thereby not entering into a discourse within communities. (Lippard, L. 1997, p24) The Manchester and Barcelona audiences were representative of a broad cross-section of the local community and they responded not only to the environment but also to each other and were encouraged to improvise with props and costumes that were brought and provided. There were numerous visitors for whom this was not a planned activity, who stumbled upon the installation while just passing through and consequently were not always the traditional art gallery audience, which added to the mix of participants and to the richness of the response. Lucy Lippard advocates the idea of artworks that engage with everyday life and our public spaces, in order to improve our sense of community and quality of life. “As such, it can raise the special qualities of everyday life embedded in place”. (Lippard 1997, p37) The location and time as well as other events going on around the installation also had an impact on how people responded to the work. One example of this was the inclusion in the set of a goal post and miniature football at Hangar for the audience who had come to watch a live screening of the European Championship football final. The audiences in Hangar and Madlab played a virtual game of football, with banter over the state of play. At one point an improvised score board appeared on a flipchart, which showed Manchester United winning by an impossible margin. So while this could have been a point of contention the audience

engaged in playful antagonism in order to interact with each other, and supporting Lucy Lippard's assertion that when undertaking artworks with diverse communities, risk taking is important as a way to resolve problems as well as build connections.

*"A healthy community, in a mixed society can take these risks because it is permeable; it includes all ages, races, preferences, like and unlike, and derives its richness from explicit disagreement as much as from implicit agreement."* (Lippard, L. 1997, p24)

During the initial concept development we decided that it was very important that while the installation took place outside a traditional gallery setting the signifiers were clear that this was not a reality but a fictitious space in which it was 'permitted' and safe to play. We wanted therefore to use references to the stage or set. Edward Shankin and Kristine Stiles warn of the risks that can be triggered by merging distinctions between art and life, and outline an instance when through a "Happening" intervention the injury of a performer was ignored when the audience thought it part of the act. They argue that Kaprow eventually rejected the "Happenings" movement declaring that audiences were not ready for the creative act of co-creating artworks. (Shankin, E. K. Stiles 2011) The suggestion is that it is important for audiences to distinguish between art and life in order to give them license to play, not as themselves but in a role. In this way the set or the stage reference in "All the World's a Screen" worked as a trigger for the audience that they could engage in dialogues from the bizarre to the insightful and be uninhibited in the knowledge that they were on screen in role rather than as themselves. This reference to the theatre can also encourage an audience to play and many of the early modernist art movements were interested in the connection with art and the theatre and opportunities this provided to engage with a proactive audience. Filippo Tommaso Marinetti in the manifesto "Variety Theatre" highlighted the collaborative nature of the Variety Theatre and that the audience is not "static like a stupid voyeur". (Marinetti, 1913) Marinetti promotes a proactive relationship between audiences and the artist appearing to denigrate the passive observer engaged in "spectacular culture" as identified by Guy Debord. (Debord, G. 1995)

Sonka Dinkla refers to a dual relationship between interactive artist and viewer, *"Participation is located along a fragile border between emancipatory art and manipulation. The decisive act in judging the situation is how active the unprepared viewer becomes within a certain framework of action and without specific instructions."* (Dinkla, S. 1996, p283) She implies a fine line in the relationship of control and freedom

between user and artist and suggests a potential power relationship, and a warning that the user may become manipulated. She identifies a prerequisite of easy access to the work and potentially the ideal for an intuitive interaction. This aligns with Csikszentmihalyi's theory of flow, in which he proposes that play occurs freely when the task and participants ability are matched. (Csikszentmihalyi, M. 1975, 1997)

Through the development of this open interactive system I aimed to develop an installation that offered free play, with intuitive interactivity and that offered a framework with limitless opportunities for the audience to respond. The title "All the World's a Screen" is a direct reference to Shakespeare's "As You Like It", which suggests that we are all merely actors playing roles as if on a stage and the 'seven ages of man' refers to different life stages, which we all recognise and will experience throughout our lives. In "The seven stages of man" each room represents a different stage of life including, *'infancy'*, *'schoolboy/childhood'*, *'lover'*, *'soldier/worker'*, *'justice'*, *'pantaloons'* and *'second childishness'*. The environments were inspired by representing each life stage as a symbolic metaphor of a specific room within the house. Drawing on the metaphysical and psychological work of artist such as Louise Bourgeois as well as Ilya and Emilia Kapakov I developed concepts that represented each of the life stages through the environment and theme of the room sets. The child's room was an animation and moved from classroom to playground and from beach to space, but was represented in the physical space as a child's room with a selection of model toys, figurines and clockwork characters. The Justice room was presented as a garage, complete with a car in front of a miniature video-screen backdrop, ready for a drive in the country. It was however an important part of the concept that the audience could manipulate the environment, moving objects around the space, so that at one point a dinosaur figurine was lifted out of the child's set and placed in the "Justice" room as part of an improvised car chase. Then at another point the dinosaur was moved up to the camera lens, changing scale, becoming huge in comparison to the participants. This is an example of how I created a framework for the audience to respond and play, whilst still allowing for unexpected outcomes, expending with the need for instructions. It was important the design of objects and environments communicated clearly with audiences, so that the framework from which to respond was effective. Erkki Huhtamo identifies the use of recognizable archetypes and narratives as "topoi" and this device he argues is used regularly in film, art and advertising and are legible to the audience, facilitating the communication of ideas. (Huhtamo, E. 2011) "All the Worlds a

Screen” is an open system allowing the audience to take the narrative in any direction they choose, and through this method I explored how to develop a framework, which allows for a free response from a participant. There were two stages of presentation of the work and this allowed me to make changes, adding to the interface design in order to further facilitate an open framework but also to add to elements that triggered a positive audience response, such as the inclusion of figurines. “All the World’s a Screen” was an opportunity for reflection on the themes and stages of life, but also provided a narrative for different ages to interact. At one point a couple in Manchester held up a new born baby to take part and a participant in Barcelona responded by immediately selecting the infancy room to place the performers in context. Each individual brought their own ideas and experience to the project and were encouraged to improvise with their own props. One participant wearing a hat in the shape of a cat’s head used this as part of his interaction making it into a mask so that he became half-cat half-human. In this way the narrative was created through shared stories.

Richard Sennett highlights the importance of role-play in society and identifies a “crisis of public life” brought about by capitalism and secularisation, represented by a quest for the search for the “authentic” self, the rise of the charismatic leader and performer, as a result the twentieth century citizen has become polarized and isolated. (Sennett, R. 1986, p27)

From this perspective the constant search for self, results in a narcissistic view of the world. Our search for the “true” self, alongside social mores of silence in public, has resulted in a fear of revealing this private self in public. While social mores around silence with strangers in the urban environment remain, in the twenty-first century we have seen the emergence of digital personas in culture through pervasive media. Scott McQuire argues that contrary to the Orwellian fear of a surveillance society, the global success of “Big Brother” evidences that we have embraced the webcam, projecting a public persona through social networking and reality television. (McQuire, S. 2008) The focus of this television show was on the personal interactions and personality traits of the participants and the dynamics that resulted under stressful conditions, demonstrating the continued focus in post-industrial society of the ‘authentic character’ and the charismatic leader.

Simmel’s “stranger shock”, is as true today, as in the twentieth century, we expect to pass hundreds of people each day without speaking a word to each other. (Simmel, G. 1903)

We may at the same time have a digital persona, which we project, across continents via the Internet, many with little thought of censorship or repercussions as highlighted by Eric

Schmidt C.E.O. of Google who warns that many young people today may live to regret the digital trail that they leave behind, though he contends that if they people wish to seek their fifteen minutes of fame, it is their choice.

(<http://www.nytimes.com/2010/07/25/magazine/25privacy-t2.html?pagewanted=all>)

“All the World is a Screen” is a mixed reality artwork, which offers the opportunity to explore the way that we use the physical and virtual space. Through this work I explored how behaviours change on virtual networks, and asked if people are less inhibited to take on a persona because of the presence of the screen? Installations such as “All the World’s a Screen” offer a platform for social interaction referencing the idea of a stage or television set, to encourage role play and to give license to adults to play. Sennett identifies the changes that took place in the nineteenth century around expectations of play for adults and children and a division that started to emerge between acceptable adult and child play with delineated social space and the expectation that adults would not play with toys.

(Sennett R. 1986) The annual revenue of the gaming industry today, at forty-six billion US dollars in 2014 demonstrates that our approach to play may be shifting, as it is socially acceptable for adults as well as children to play computer games.

(<http://www.statista.com/statistics/237187/global-video-games-revenue>) “All the World’s a Screen” offered the opportunity to further break the conventions of play in public space, quite literally, with children’s toys making up part of the set, the work encourages ludic play, an escape from the self as opposed to the creation of an image of self.

“All the World’s a Screen” offers the opportunity to explore our digital persona and culture as a platform for role play, using social networking technologies such as the web cam and video conferencing. The focus is on play, rather than on projecting a ‘true’ personality so potentially providing an alternative approach to social networking. Sennett argues that in pre-industrial society this opportunity was offered by the theatre, where interaction between audience and players was encouraged they would intermingle, literally, as seats could be bought on stage. The audience responded emotionally in a way that would be socially unacceptable for an inhibited modern audience. Sennett highlights the importance of the role of art to inform us about life. (*Sennett, R. 1986, p41*)

“All the World a Screen” is an open system, promoting interaction between communities using play. This open system offers participants the opportunity to undertake multiple roles

and open dialogue, often relying on body language for communication as language in many instances is not shared.

Through my practice based research I gathered data on the audience response to the environment and I documented the way in which the different representations of rooms and objects were used to develop stories. The data was gathered through filming lineout video, which captured the screen image that participants saw when engaging with the work. In this way I had a document of every gesture, movement and interaction and mapped this against the framework outlined below. This offers an invaluable insight into the way that the audience engage with the work and the resulting interactions and responses from others. It also directly documents the individual narratives as they unfold. This was supported by further video and photographic documentation as I wanted to record the external environment as the way that the audience participate with interactive installations can be dependant on various factors and this is reaffirmed by other research that found that audience interactivity depends on the emotional state of the user (McCarthy et al. 2004) and that levels of interaction are dependant on the personality of the user. (Brave et al. 2003, p81-96)

Through my methodology I developed a framework to measure open and closed systems using Hans Scheuerl's (1965) definition of games as:

- (i) "Freedom", no goal outside it's self
- (ii) "Infinitude" with no preconceived ending
- (iii) "Closeness of the game" the rules or defined area of play
- (iv) "Ambivalence", movement between rule and chance
- (v) "Virtuality", separate from "real life" and the self (*Scheuerl, H. 1965 p607*)

"All the World's a Screen" aligns to these attributes as defined by Scheuerl as it offers freedom, with no goal outside it self, it is an open system with no defined ending, there are rules in so far as there is a designated camera and screen area, but the narrative can move between different states. The artwork aims to encourage interaction through play drawing people together whom otherwise would never have met to interact, talk and role-play. Visitors have the opportunity to engage with both local communities and others globally in "ludic" play.

Below I will identify key frames against the categories plotted on “Open Closed Data Map”. “Infinitude” and “freedom” are evidenced by ludic scenarios which include in frame 0:15 a man held a magnifying lens to the camera, in frame 5:38 a man with a baby in his arms sat on a cot, while on screen another man’s face from Barcelona is superimposed over his face. In frame 5:53 the man in Barcelona held the baby. In another situation (frame 5:21) one man’s head is superimposed over another and they engaged in crazy dancing. Some of the most ludic interactions involved props brought along by the audience, demonstrating “closeness of the rules” that there was significant room for the audience to contribute in unexpected ways, such as a man who wore a cat hat, at one point danced with another man who peered through his stomach (using a blue-screen cloth). In another situation the man wearing the hat put his head off screen with the cat visible, as a woman petted the cat as if alive (frame 1:59). These scenarios could not have been foreseen or pre-planned, and are examples of humorous engagement which have no link to the external world outside of the installation. In other scenarios people responded often in unexpected ways to elements of the installation, using the props provided, again in a ludic way and this indicates examples of “virutality”, unrelated to real life, demonstrated by the fact that there was a lot of room for audience interpretation, such as in frame 3:56 a boy gestured as if to be picked up by a giant hand, a man rowed across the sea in a giant yellow bucket while another man peered through his stomach (frame 4:39), a man ran ahead of the driving car as if being chased ( frame 3:59), two boys in Manchester and a man from Barcelona sat on a rocket, gesturing that they are the three wise monkeys (frame 2:27) Examples of “ambivalence”, movement between rule and chance, could include in frame 2:27 a woman removed her face while a giant hand moved a horse up to look at her. In frame 2:33 a man stood behind a flip chart superimposing his body on that of a drawn robot. The latter two examples are reminiscent of the surrealist game “exquisite corpse” which used chance to construct characters. In frame 3:40 a man with a hole in his stomach tried to save a goal. In frame 1:17 a woman from Barcelona placed her head on a table as if decapitated, laughing. In the next frame 1:18 a man interacted to put something over her head. A man hid his head slowly to reveal a tiger head, as if his own. In frame 1:55 a woman in Barcelona hid behind a man in Manchester waving her arms as if an extra pair of limbs. In frame 0:33 a man came into the frame slowly opening his raincoat to reveal a hole in his stomach. The lack of physical presence appears to take away inhibitions around the preservation of personal space, so that in frame 1:40 a man in Barcelona rested his head against the shoulder of another man (a stranger) in Manchester and in frame 1:41 a woman

in Manchester gestured to tickle a man in Barcelona. Dancing is an area that deflects from inhibitions around personal space and a boy and man in Manchester and Barcelona body popped together (frame 3:43). In frame 4:26 two men across Manchester and Barcelona face-mapped (placing the face of one on to the body of the other) while dancing. The telematic quality of the piece also encourages people to overcome language barriers through gesture and body language, in frame 0:33 a man in Manchester gestured that he had eaten too much. The reference to the silent movie appeared to inspire confidence in participants to engage with acting, this may also have been the nature of the community space in which the work was exhibited, giving people confidence to overcome inhibitions and immerse themselves in the work, demonstrated by two boys who looked shocked as they speed around the corner in a driving scene (frame 3:49).

Opportunities for open interactivity are key to “All the World’s a Screen” and there were alternative ways for interacting with the piece at different levels of engagement. The participants in Barcelona had the option of either controlling the camera views and environments in the model set or being on the blue screen, interacting with the set or characters on screen. The audience could place their hand into to the set and on screen it would appear as if the “hand of god” had intervened in the interaction (Huhtamo, E. 2011)

“MadLab’s” creative director, Dave Mee recounted some of the highlights and resulting narratives, which included; Manchester based poet Carol Batton who shared local social histories with attendees in Barcelona as well as reading performance poetry. Her marathon poetry performance ran for several hours, responding to the shifting audiences and scenery in Spain. The venue itself was another contextual platform to reference Marx and Engels’ relationship to Manchester, stories that were well received by her local audience. Local performer Adrian Slatcher drove a car through Barcelona with passengers from Spain. The technology allowed him a seamless means of communicating and interacted with a remote audience without resorting to the use of language. Dave Mee from “MadLab” ran a telematic “Health and Safety” Seminar with the aid of a flip chart, as well as playing remote noughts-and-crosses with a losing team from Spain. Concerned about the potential danger of objects falling and causing telematic injuries, he took the initiative of bringing in some props from Manchester to illustrate scenarios and ensure compliance with local legislation. The flip chart made it possible to create imagery accessible to both locations, but introduced an element of frustration for Barcelona, who could only watch and request

without being able to affect the outcome - the antithesis of a shared space, which appealed to his sense of the obtuse. Through the use of blue fabric participants made a framed hole in other participant's stomachs, and popping out of other people's bodies was a particular motif of the day. With "MadLab" having control over the final layer of the composite image, they could ultimately determine what images were manifested for the shared audience; harking back to Victorian seaside stand-ins, the fluidity and flexibility of the digital medium allowed for greater play in exploring and creating new compositional and performance opportunities. Props, such as picture frames, were used to start with, but later Chroma-key reveals such as science fiction scenes from Paul Verhoeven's *Total Recall* (1990) were recreated, to degrees of success.

The interplay between small-scale model and the large scale set interestingly aligns with some of the early developments in technology. Many of the early forms of viewing apparatus involved individual viewing by choice, similar to more recent use of digital media, such as smart phones, iPods, and iPads where playing games and watching movies is a solitary experience. The Phenakistiscope with one viewer and the Zoetrope and Praxinoscope, which were multi-viewing devices, with a choice of content (a viewing strip).

Through my practice based research I explore methodologies of drawing the visitor into the virtual environment, transporting them away from the self and into a third space on screen. I wanted to create an immersive environment and employed an aesthetic which had elements of the real but at the same time were clichéd and 'unreal', out of perspective or clearly like a set, as with the car scenes from Hitchcock's "To Catch a Thief". As an audience we know that there is a screen playing behind the actors and props. This is reminiscent of the many films that the audience has seen using this technique and symbolizes a mediated reality within film through the suspension of disbelief and in this way gives license to the audience to react or invent similar or new scenes. Alfred Hitchcock often used small-scale models using "scenography" techniques to develop a sense of dramaturgy in his films. My general approach employed versions of early techniques, simulating analogue cinematic effects, again to create an uncanny sense of the real yet virtual to signify a playful environment, whereby what happens in the space is imperfect, a space for imaginings and experiments rather than a realist cinematic re-enactment.

Through the research process I explored forms of technology to inform the set design. Such techniques have been employed since the renaissance to deceive the eye with the use of optics and mirrors (Virilio, 1994, p15), panoramas, dioramas, magic lanterns and peppers ghost. These techniques reached their height of popularity in 1900 at the Universal Exposition in Paris when the first experiment with the “Cineorama” by Raoul Grimoin-Sanson was also presented using the newly invented film to create a simulation of a hot air balloon ride, comprising of ten projectors in a cabin. Unfortunately it did not work due to the extreme temperatures created by the projectors, but its technological ambition was exemplary of its time.

In “All the World’s a Screen” I employed a range of equally illusionary techniques in the seven rooms of the model house to develop this immersive environment. These rooms contained a range both webcams and symbolic references to “The seven stages of man”, such as the metaphoric “second childishness” room, which featured the juxtaposition of a hospital bed in a children’s ball-pit ward.

Methods of visual trickery were used with the introduction of film and early matte techniques used by the Lumière Brothers. The medium of film left early audiences in awe and on the Lumière Brothers first showing of their “L’arrivée d’un train en gare de La Ciotat” (1895) the audience screamed and ducked as the train appeared to be breaking outside of the frame, towards them (although there is some contention over whether this actually happened). Georges Méliès was one of the first filmmakers to use special effects such as multiple exposures and time-lapse photography. His “A trip to the Moon”(1902) and “The impossible Voyage” (1904) which involved surreal journeys into other worlds and these films are seen as some of the first science fiction films. Similar techniques were employed in “All the World’s a Screen”, particularly by the participants at MadLab in Manchester who contributed live visual trickery effects, using pieces of blue fabric to blot out parts of the body and create collaged figures and faces made up of multiple participants from both locations. This sense of illusion was further explored in early cinema through the “rube” genre where live action takes place in front of a screen projection. Edwin Porter’s “Uncle Josh at the Moving Picture Show” (1902) depicts a character watching the Edison movie, “Parisian Dance” (1897), he jumps on the stage to flirt with her, running off the stage at the sight of the “Black Diamond Express” (1897), jumping back on stage for

the final scene. In “The Country Couple” (1902), when the father mistakes one of the parties as his daughter he tears down the screen falling into the arms of the projectionist. The “rube” concept was referenced in “The Seven Stages of Man”, which included a mini desktop video projector in a room at the centre of the model representing a miniature cinema, as a film within a film. Symbolising the ‘lovers’ room the cinema screened the same animation that appeared as the ‘lovers’ backdrop, offering further clues to the theme of the room and possible plot.

Back projection techniques, known as the Shuftan Process were used by Fritz Lang in *Metropolis* (1927) to project a film of workers marching onto a miniature model of a building. This technique was also used by Alfred Hitchcock in “Blackmail” (1929), as well as the “39 Steps” (1935) and again in 2003 for “Lord of the Rings”. One of the first films showing moving film outside the set window included “The great Train Robbery” by Edwin S. Porter (1903). This clichéd technique proved very popular in “The Seven Stages of Man”. The webcam view of the car positioned in front of a small LCD video screen showing a drive through the countryside was particularly convincing in its filmic language, which involved many scenes of car chases in pursuit of running pedestrians, made up of multiple participants from Barcelona and Manchester.

The new technologies of the early twentieth century were regularly shown at the traveling fairs. Technology became a large part of the experience with elaborate lighting displays and early-automated rides, as well as being used by fortune-tellers and spiritualists. The working people were astounded by the “spectacle”. Early filmmakers, Michel and Kenyon from the North West of England would show films at the fairs, recorded earlier at local factory gates and promenades, whilst advertising their screening later at the traveling fair. People played to the camera, sometimes joining in a formation dance with others, posing for the camera, playing up to the camera to enjoy the playback at the fair later that day. In this way they were engaging with the presence of the camera, creating a narrative or response to other participants within the viewfinder. The striking similarity with the way audiences reacted and responded in “All the World’s a Screen” is very clear and these early self-view film screenings possess all the traits of telepresent interaction, whereby the audience responds to a stimulus and thereby direct and change the outcome.

The techniques of visual trickery employed in “All the World’s a Screen”, and the application of the “lo-fi” aesthetic was part of the playfulness of the piece, indicating to an audience that this was an experience separate from their lives, this was an otherworldly space, where they could explore, experiment and play and at the same time symbolizing the “topoi” of the movies. This use of the low-fi aesthetic has been an on going theme through out my projects and I had found that this attracted people to the work and encouraged people to want to participate and play, in an alternate reality. In this way the audience could invent, make and edit their own movie. Kristine Stiles and Edward Shankin highlight the importance of making a distinction between art and life and using methodologies of separating life from art can enhance the audience’s willingness to participate. (Shankin E. Stiles, K. 2011) In this way identifiable signifiers, such as the use of a stylized or unreal looking aesthetics; an obvious set, can indicate to the audience that this is something other than reality and potentially could liberate the audience into feeling able to role play. They are not playing themselves; therefore they can feel uninhibited to engage. Through this project I was able to research alternative ways of using social media and networked culture, which avoids focusing on the self and instead looks to forms of play such as mimicry (for example where participants re-enact topoi from the movies or popular culture) as well as ilinx (thrill, sensations, for example on driving or running away from the moving car). These two forms of play, defined by Roger Caillois were utilised as a way of enhancing interaction between communities. (Caillois, R. 1958 p128) In the large urban cityscape interactive installations can offer opportunities for people to experience their environment in different ways, talking to strangers, giving license for all ages to play and explore communication in order to cross the boundaries of culture and language. Through “All the Worlds a Screen” I explored the potential for triggering ideas for narrative through this open interactive system. I applied past modes of practice in order to inform an application of the latest digital technology to identify new ways of engaging and new forms of interaction within a globally networked society.

Through my practice based research I explore methodologies of engaging the visitor in the virtual environment, transporting them away from the self and into a third space on screen. It was my intention to create an immersive environment but I employed an aesthetic which had elements of the real but at the same time were clichéd and ‘unreal’, out of perspective or clearly like a set, as with the car scenes from Hitchcock’s “To Catch a Thief”. The techniques of visual trickery employed in “All the World’s a Screen”, and the application

of the “lo-fi” aesthetic was part of the playfulness of the piece, indicating to an audience that this was an experience separate from their lives, an essential element of play as defined by Huizinga. (*Huizinga, J. 1938, 2008*) This was an otherworldly space, where participants could explore, experiment and play and at the same time symbolizing the “topoi” of the movies.

“All the World a Screen” aims to inform us about how we might find ways of engaging communities. It is an open system aimed at promoting interaction between communities using play, offering participants the opportunity to undertake multiple roles and open dialogue, often relying on body language when language is not shared. It was the use of the body as interface that allowed for open interaction, the importance of the body to connect the user to the screen is highlighted by Patrick Allen, but free play allowed by the representation of the user of their physical body allows for a truly open system offering endless possibilities and increasing the chance of the unexpected occurring. (Allen, P. 2008) The focus on the body was coupled with a suggestion that the participant should forget the self, rejecting ideas of presenting a constructed image of self and instead becoming immersed in play, triggered by the environments and props. In this way I researched alternative ways of using social media and networked culture, which avoids focusing on the self and instead looks to role-play as a way of enhancing interaction between communities.

#### 4.6 “Mirror on the Screen”, Nottingham Playhouse 2013

<http://charlottegould.org> -Website documenting Urban Screen installations



Figure 11 “Mirror on the Screen” Participant interacting with virtual environment  
4<sup>th</sup> September to 30<sup>th</sup> October 2012 © Gould, C. Sermon, P.

This installation allowed the Gallery visitor and their ‘Second Life’ virtual avatar to confront each other and coexist in the same enchanted forest environment in a live interactive public video installation at Nottingham Playhouse theatre. The audience was able to use and control the keypad arrows to move the avatar around the scene and explore the virtual forest scene and through surprise encounters the virtual avatar was able to come face to face with its physical ‘first life’ counterpart.

This project looked specifically at using digital technologies and ludic interfaces as a means to connect visitors to a space, and to engage unusual audiences in digital media using social networking platforms such as Second Life to bridge first and second life through mixed reality techniques and interfaces. The project was hosted by “The Cutting Room” to support the play “The importance of Being Ernest” which was showing concurrently at the theatre. This offered an interesting opportunity to research into ways of engaging with an unlikely audience, a traditional theatre audience but not necessarily interested in art, digital media or social networking and the largest demographic group

within the audience was over forty. Many of the participants commented that they had never used an avatar, or “Second Life” and they were delighted when the moment came when first and second life merged. This was a point of discussion for audiences both before they entered the first and second acts and on final curtain and this provided a social point within the evening, so that while only one participant could use the piece at a time the audiences helped each other to problem solve navigating themselves around the environment and in that way engaged with interactions that they would not have otherwise encountered.

One participant recorded his mixed reality experience on the “Creative Nottingham” Blog <http://www.creativenottingham.com/2012/09/05/special-event-blog-dual-digital-art-from-the-cutting-room/> “*Mirror On The Screen by Paul Sermon and Charlotte Gould. This also is a virtual reality environment, in Second Life, with the extra fun of seeing your own face when the avatar you control looks into a mirror.*” The reviewer expresses the experience of viewing the image of the self as additional “fun” rather than an opportunity for collaborative creativity. He also notes the strangeness of the world with “*more interesting flora and fauna – flying fish here really do move through the ether.*”

The project further examines the blurring between ‘online’ and ‘offline’ identities, and it explores the avatar in relation to its activating first life agent, focusing on the avatar’s multiple identifications, such as gender roles, human/animal hybrids, and other archetypes, identifiable through visible codes and body forms in “Second Life”. This is one of a number of installations that I have developed using “Second Life” with opportunity to explore the interaction and exchange between online and offline identities through social practices, such as performance, narrative, embodiment, activism, place and identity construction.

This installation links to my previous installation, “Ludic Second Life”, for this piece the enchanted wood environment was re-developed as were the references to fairy tales to include animated animal avatars such as foxes and goats. In this piece the audience can confront themselves within a number of mirrors placed with in the environment. The audience navigates the space using a control pad, again one user at a time. I abandoned the motion tracking for this work because it was not sensitive enough to the participant’s movement. There was a physical backdrop, which extended the enchanted wood scene

with shared elements from the woodland scene, in a clearing of an English country garden.

This work was about encouraging play within public space, and as part of my methodology, I have developed a framework for interactive installations using Hans Scheuerl's definition of games with five attributes of:

- i) "Freedom", no goal outside it's self*
- (ii) "Infinitude" with no preconceived ending*
- (iii) "Closeness of the game" the rules or defined area of play*
- (iv) "Ambivalence", movement between rule and chance, serious and fun, impulse and cognition, immersion and reflection*
- (v) "Virtuality", separate from "real life" and the self (Scheuerl, H. 1965 p607)*

In "Mirror on the Screen" the audience were free to choose whether to engage with the work, the artwork had no external goal, and constituted a diversion from everyday life. People were at the theatre, so were involved in a leisure activity, again separate from the everyday, so while the occasion of the theatre is special, the audience are there to enjoy the spectacle of the theatre, as passive observers. The introduction of an interactive work, potentially changes the audience relationship to the space, from passive observer to instigator, I explore this further below. While the parameters of the installation were clearly defined, people were at liberty to explore the environment as they wished, so in terms of "infinitude" there was no preconceived ending, but there were surprises as the participant entered different areas of the forest and caught glimpses of the self as they explored the space. There was not a preconceived finale or end purpose, but a series of explorations. Similarly with the criteria of "closeness of the game" the defined area of play is programmed into the piece, so only that participant could explore the areas as defined by the artists. Similarly the opportunities for movement between rule and chance, or "ambivalence" were limited to when the participants confronted the self on screen. On exploring the environment the user was limited to the choices afforded by myself as artist, until the moment that the mirror is found and the audience has free reign for self-expression, impulse and cognition, immersion and reflection. The environment of the enchanted forest borrows from the shared narrative and topoi (Huhtamo E. Parikka, J. 2011) of the fairy tale and signifies the "virtuality" of the space, playing with mixed realities, and reaffirmed by the aesthetic of the low fi hand drawn, superimposed on the super realism of the 3D virtual environment, with a backdrop suggestive of a studio space,

demarked by its stylised imagery, the installation presents a third space, which is separate from “real life” and the self in which the audience can play.

A large proportion of the “Mirror on the Screen” environment are predefined, but there were also areas that gave way for input from the audience giving autonomy, defined by Kelly as a precursor to a collaborative work as opposed to an interactive work where artist retain control, even when many routes and layers are offered. (Kelly, J. 1997) Sharon Daniel reaffirms this and defines interactivity, which she refers to as “monolithic” as a one-way exchange from artist to user, and identifies “collaborative exchange” as a key driver to the definition of the “dialogic”. (Daniel, S. 2011 p74) Mirror on the Screen sits on a continuum between the two as, the pathways and objects within the space are predefined, however once the user can confront them-selves on screen integrated into the environment, they have free reign to introduce props, perform to the camera, interact, introduce other characters etc. For this reason, the work also fits within all three of Shaw and Weibel’s definition of open systems, “*distributed form*” where multi-direction communications can take place, “*transcriptive form*”, a multi-layered narrative, and within “*recombinary permutation*” involving an element of chance. (Lovejoy, M. 2011 p18) From my observations, however the limitations in-terms of openness of “Mirror on the Screen” as an interactive and truly distributed form are highlighted by Roy Ascott’s proposition that the audience should be removed and all participants should be fully active in an artwork so that the potential for spectacle is removed, in order to achieve “*an open ended evolution of meanings and the closure of an autonomous frame of consciousness*”. (Ascott, R. 1999 p70) This suggests that without the presence of the observer the participants can potentially engage in a form of shared consciousness. The audience were at times inhibited to participate with the installation due to shyness, as only one person could control the joystick. Participants often, however stood within the frame in pairs or with the group that they had come to the theatre with, so this often dispelled self-awareness, but the participants appeared largely to remain aware of those around watching. An exception to this was a teenage girl who played for a large part of the interval, immersed in the environment, with a crowd around her watching. She said that she loved computer games and really enjoyed the installation. Her age and familiarity with computer games meant that she felt confident using the control stick, in keeping with Csikszentmihalyi’s theory of “flow”, (Csikszentmihalyi 1975, 1997) where people become immersed in an activity and loose sense of time.

#### 4.7 “Occupy the Screen” Berlin, Riga 2014

<http://charlottegould.org> -Website documenting Urban Screen installations

<https://vimeo.com/115764892> -Vimeo site featuring line out and documentary videos



*Figure 12 “Occupy the Screen”. Audience participants in Riga interacting with the screen. 11 Sept. 2014. © Gould, C. Sermon, P.*

Occupy The Screen was a site-specific work commissioned by Public Art Lab Berlin for the Connecting Cities Festival event “Urban Reflections” from 11 to 13 September 2014, linking audiences at Supermarkt Gallery Berlin and Riga European Capital of Culture 2014. This installation built on the practice-based research and development of previous interactive works for large format urban screens as such as “Picnic on the Screen” (Gould, C. Sermon P. 2009), originally developed for the BBC Public Video Screen at the Glastonbury Festival of Performing Arts. The project was part of a Connected Cities EU consortium involving big screen curators and artists who came together for a workshop in Berlin, as part of the Transmediale Festival 2014 <http://www.transmediale.de>. Here curatorial teams, cities, screens and artists were aligned and we delivered a public workshop as part of the festival based on our research findings to date. As part of the workshop we considered what the essential criteria were for urban screen works and discussed previous projects.

“Occupy the Screen” pushed the playful, social and public engagement aspects of the work

into new cultural and political realms in an attempt to ‘reclaim the urban screens’ through developments in ludic interaction and HD videoconferencing. Through the use of illustrated references to site-specific landmarks such as the “Freedom Statues” of Berlin and Riga, audiences were invited to “Occupy the Screen” by interacting within these scenes and through this piece audiences could climb the “Freedom Statue” in both cities, with scenes reminiscent of the crowds claiming the Brandenburg gate after the fall of the Berlin wall in 1989, scaling the monument as a symbolic subversive act. The title also refers to the fact that many urban screens, for example those in the UK erected for public engagement as part of the cultural Olympiad were used largely for news and sport, and when used for culture focused on the public screens of the “spectacle” of the opera, film or music festival. (Debord G. 1995) The concept development and call to action of “Occupy the Screen” was further inspired by 3D street art as a DIY tradition, referencing the subversive language of graffiti. The interface borrows from the “topoi” of the computer game, as a means to navigate the environment; once within the frame the audience becomes a character immersed within the environment.

“Occupy the Screen” linked two geographically distant audiences at separate screens using a telematics technique; the installation took live oblique camera shots from above the screen of each of these two audience groups, located on a large fifty square metre blue ground sheet and combined them on screen in a single composited image. As the merged audiences started to explore this collaborative, shared ludic interface, they discovered the ground beneath them, as it appeared on screen as a digital backdrop, locating them in a variety of surprising and intriguing anamorphic environments.

“Occupy the Screen” aimed to include the widest range of urban participation possible, and aligned to a tradition using interaction and ludic performance within the street environment, developed through Dada as well as the Fluxus “Happening” events, conceived of as a subversive form of intervention through the rejection of the formal art institution of the gallery, as Lucy Lippard suggests, in a move away from the object as art towards the street and the “every day” experience. (Lippard, L. 1997) It also borrows from a tradition of early twentieth century media developments where audiences were transfixed by the magic of being transported to alternative realities through moving panoramas, magic lanterns and early film at the traveling fairs. Lumière contemporaries, Mitchell and Kenyon, whose films of public crowds in the 1900’s present a striking similarity to the

way audiences react and respond to urban screen installations such as “Occupy the Screen”. These pioneering fairground screenings of audiences filmed earlier the same day possess all the traits, albeit the latency in processing, of live telepresent interaction, whereby the audience play directly to the camera and occupy this new public space by performing to themselves and others when screened later. Initially the audience can be immersed in the spectacle of sight of their mirror image on screen, but once the potential for interactivity becomes apparent this spurs participants into action.

The position of the urban screen as street furniture is ideally suited to engage with people going about their everyday life, and often the most interesting outcomes are discovered through the ways that the public interprets and re-appropriates culture as identified by Michel de Certeau, encapsulated in the term “Users tactics”. (Certeau, M. 1980, p480) De Certeau draws attention to actual use rather than prescribed design, which is an area of focus for my research in measuring open systems. The interaction is an open system aiming to offer the audience a means of agency, defined as by Browning as freedom to be creative and make individual decisions. (Browning D. 1964) As part of the project development, workshops were held with the local community in Berlin, with a multi-cultural demographic, there is a large migrant community in Wedding-Moabit and the Public Arts Lab were keen to ensure that they were represented in the development of content for the work, and I also wanted to find ways of engaging the audience in the making of the work so that I was able to reflect rich layers of experience with “hybrid nonlinear stories” rather than reflecting a “homogenous view” of place. (Lippard, L. 1997 p24) The workshop participants identified local significant landmarks and discussed their experience in the local environment, their history and cultural references, also their idea of tourist routes through that part of the city. In this way the public were able to inform the content of the work, and I used their feedback and ideas to inform the content of the environment. As well as my visit to Wedding-Moabit, I used “Apple Maps” to explore the environment and inform the development of the work. This also helped me visualise the oblique forty-five degree angle that I needed to represent visually through the interface. I developed the landmarks suggested as well as artefacts linking to the cultural migrant community involved, at the same time representing both of the cities of Riga and Berlin, including pattern as well as reference to the county of origin. This follows the tradition of dialectic art as an intervention outlined by Kester (Kester, R. 2004) and supports Roy Ascots proposition that in the “whole system” “a viewer plays an active part in an

artwork's definition and evolution" of the work. (Ascott, R. 1999 p67)

This installation was the penultimate method of my research practice for this PhD, but at the time of its development I believed that it would be the final work. My methodology involved observation, and capturing the lineout video of the screen. I also used the research questionnaire that I had developed from my observations up to this time as I wanted to test this as a method, but had up until this point used observation and monitoring and plotting of the lineout video as a preferred method. Helpers were available to support the work and they were able to ask the audience questions, as the majority of participants could not speak English. I will reflect on the outcomes below, but found this method to be the least effective way of data gathering, as I observed that it put people off, participants who were interviewed tended to stay for less time on the installation, their concentration was interrupted, on approach they began to pull back, this often prompted people to walk away where others would stand on the side line and watch often returning to engage with the work again. The other limitation of questionnaires is participant and research assistant understanding; it is difficult to ascertain whether the questions translated effectively or slightly changed meaning, it is also difficult to measure the quality of the comprehension of the participants regarding their experience. I have found that watching the lineout videos shows every nuance, expression and interaction of those interacting with the artwork and therefore I find that these outcomes from the timeline mapped onto a framework provide a reliable method for data gathering.

I mapped the outcomes from both my observations and from the line out video on to the data map that I have produced informed by Hans Scheuerl's definition of games:

- (i) "Freedom"
- (ii) "Infinitude"
- (iii) "Closeness of the game"
- (iv) "Ambivalence"
- (v) "Virtuality" (*Scheuerl, H. 1965 p607*)

I found that that the mapping of outcomes across the criteria followed a parallel trajectory within the open closed framework. I have highlighted a leading criterion for each instance, but there are overlaps across the categories. "Freedom" to respond to each other at times negating the suggested environment is evidenced in the following frames, [13] in 03:02 a

woman in Riga gestured to shake hands with a man in Berlin, another woman in Riga moved as if to push a boy in Berlin. The physical freedom of participants is highlighted [36] in frame 06:10 when a boy breakdanced across the floor, while a woman reached forward to get into the bath. There are instances when peoples everyday life became integrated into the piece and in [60] frame 10:53 two lovers in Riga arrived from an evening out, they sat in the boat, the woman was holding a bunch of flowers, while they rocked the boat then kissed. Freedom to introduce participants own props also added to the narrative and examples include in [75] frame 14:36 two men in Riga (in their 60s) holding umbrellas entered the frame and started to dance, while a boy in Berlin stood on the turf, one brandishing a sword, being watched by a boy in Riga.

Examples of “virutality” include instances of ludic play where people engaged in nonsensical activities such as [48] in frame 08:45 two men (late teens) in Riga flapped their arms as if to fly, another lifted his arms as if to glide, while a boy and girl with balloons (age 8-12) in Berlin watched. [63] Imaginary play and narrative sequences emerged through participant’s interactions drawing other participants into the scene including in frame [22] 04:18 a man (in his 20s) in Riga shuffled from side to side while children in Berlin (8&10) chased behind. [35] In frame 06:06 a man in Riga (in their 20s) moved to the quay and a man in Berlin followed, running on the spot. There are many instances of mimicry across age groups and locations. It is the remoteness of the sites that give strangers license to cross personal space and apparently touch, such as in frame 02:02 two women (in their 40s in Riga) entered the screen and held out their hands to rescue a boy and a man both in Berlin.

There are many examples of visual trickery centred on the joining together in the two locations including [46] in frame 07:45 when three men (in their 20s) in Riga, and two women (in their 20s) in Berlin formed a line and danced and [70] in frame 13:32 a man in Berlin gestured to tap a woman’s head in Riga, the woman bounced as if a ball. When groups of participants were present who knew each other, this often had a positive impact on others present who were strangers as it changed the dynamic appearing to give others confidence to join in, minimising inhibition. The following frames form a sequence of action, which demonstrate connectivity between participants in the mixed reality environment who included the curators from both cities, so some of the participants were friends and on the final night as a celebration of the end of the festival, this took place just

before shutdown of the piece. [97] In frame 23:27 people in Berlin and people in Riga appeared to join hands and run forward. [7a] In frame 29:46 participants from Riga and Berlin touched hands in the middle [8a] in frame 29:49 participants from both sides raised hands in the air, [9a] in frame 30:08 a couple from Riga strangers to the other participants broke into the centre and danced, [1b] In frame 30:24 three men from Riga (in their 30s) entered the circle and danced.

Instances of “closeness of the game” happened when participants remained faithful to the environments, and did not diverge much from the suggested scenes. [49] In frame 08:56 three men in Riga (in their 20s) started to dance on moving hedges. [27] In frame 05:02 a woman (in her 20s) in Berlin gestured to step down the stairs into the bunker. [50] In frame 09:13 a man and woman in Berlin (in their 20s) balanced on a plank across a hole, a man in Riga (20s) stepped in and gestured a wobble as if to almost fall.

Instances of *infinitude*, took place when the ending was unpredictable, they were situations that were unexpected so often had elements of the ludic which is closely aligned to “virutality” such as [58] in frame 10:27 two children were in a boat (a prop introduced to the installation), one woman in Berlin (in her 50s) kneeled by, holding a balloon. [59] In frame 10:37 a woman in Riga (30s) jumped into the boat, she gestured to take the balloon. [61] In frame 11:07 a boy jumped from quay into the boat, joining the boy in Berlin, while a woman in Berlin stood on the quay.

Unpredictable instances can include behaviour that could become undesirable; the next scene had potential for this but did not get that far. [92] In frame 20:02 a man in Riga (30s) took off his jacket and unbuttoned his shirt collar, a man in Berlin (in his 40s) gestured to take the jacket on the floor, which acted as a diversion and stopped the man from going any further in his dishabille.

Instances of “ambivalence” or the movement between rule and chance, include the following, where instances score highly in terms of “virutality” and “infinitude”, with participants responding to the environments in a ludic or surprising way, in this way again demonstrating high levels of choice but moving between the chance encounters with others and response to the environments in each scene. [41] In frame 06:55, three women, two in Berlin and one in Riga (in their 20s) sat on chairs at the table, a man in Riga (in his 20s)

stood on the table. [42] In frame 07:00 a woman in Riga moved to stand on the table then jumped on to the floor, women (in their 20s) in Berlin moved their hands to spur her on. [43] In the next frame 07:11 the woman in Riga (in her 20s) moved back on to table top, the man (in his 20s) in Riga moved to crouch in front of the table, all three woman stroked his head. [44] The unpredictability of the actions are encouraged through the changing interface and in the next scene, in frame 07:24 two men in Riga and a man and woman in Berlin stood on the floating turf, while a woman held the ankles of a man in Berlin. [74] Another example which scores highly on “virutality” but I have included here because it responds closely to the environments, is in frame 14:27 when two boys one from Riga, the other from Berlin (11- 12) jumped across the moving turf plinth as if “Super Mario” characters in a computer game.

Through my research I have found that the environment and timing have a large impact on the way that an audience responds to an interactive work. *Occupy the Screen* was shown at night, in September. The organisers had wanted it to be an evening projection installation as part of the programme for the Wedding-Moabit Festival. This caused some technical difficulty initially with the Chroma-key. There were also other events staged in Riga’s “Esplanade Park”, with loud music playing each night, which initially seemed a little intrusive, but in the end, contributed to the work.

Participants were at liberty to decide whether to engage with “Occupy the Screen”, and as soon as we switched the installation on, even for testing, people were keen to engage with the work, so this aligns with the criteria of “freedom”. It had no goal outside it’s self, the environment was available for people to engage or just to observe, as they wished. The inspiration for the environment was drawn both from the cities of Riga and Berlin, with input from the communities, but also from the idea of street interventions such as anamorphic pavement art and chalk drawings, where from a particular position the characters can look as if in a precarious situation. In “Occupy the Screen” this included scenes where participants could be suspended on a plank high above a salt lake in Turkey, or on an over sized wooden bridge. The installation was designed for the audience to engage in an intuitive way and there was no preconceived ending, in-keeping with the characteristic of “infinitude”. The area of play was clearly registered as a space, as a blue box both in Berlin and in Riga and they demarked the rules of play. Once in the space, unless covered in blue the participant engaged as they wished. The environment may

suggest activities or events but the audience is free to engage in any way that they chose to, so that rules are limited and focus on the defined area of play in relation to the category of “closeness of the game”. This also meant that “ambivalence”, movement between rule and chance, serious and fun, impulse and cognition, immersion and reflection, were constant and were in flux throughout engagement with the work. It is this fluidity, which is key to the characteristic of an open work, that there is significant opportunity for the unexpected, opportunity for “user tactics” as defined by Michel de Certeau and that chance encounters can change the direction of a narrative that is unfolding. (De Certeau, M.1984) I used my experience of previous installations, to inform elements of the design to include objects that people could engage with, but also playing with perception of vision and illusion. This included a pop art inspired tunnel, which participants intuitively jumped into, and steps, which disappear into an underground bunker. From my observations optical illusions acted as a signifier of play, people inherently recognised the environment as playful. This may have been successful particularly because it represented “virutality”, a space separate from “real life”. I also used the idea of the computer game as a design reference, and one child participant at one point shouted “Wow Super Mario” as I had incorporated references such as box hedges suspended in space, which participants recognised as platforms across which to jump, utilised in “Super Mario” games. The environments often triggered a physical response such as jumping, diving or climbing, such as the swimming pool to dive into, coloured boxes to climb across. This clearly contributed to the active approach that the majority of the participants took. This was further enhanced by the music, and many people engaged with the environment through dance. One woman stayed for hours at the installation dancing and interacting with the other participants, returning the next night to do the same.

As part of my research methodology I asked one hundred participants, fifty in Riga, and fifty in Berlin to feed back on questions developed in response to my observations so far and in keeping with the research framework for open systems. Facilitators employed to support the installation on both sites implemented the questionnaires to overcome language barriers. This also meant that I was able to observe participants, filming and photographing interactions so that I could quantify audience perception against audience observation. Results in Riga and Berlin are quite different and it is possible that this may have been due to audience or facilitator misinterpretation of questions that could impact on outcomes in some instances, but also slightly different environmental factors may affect the way that

audiences respond. A number of studies have identified factors that can influence audience interaction including McCarthy et al who found that the interactions are influenced by the emotional state of the user (McCarthy, J. and Wright, P. 2004), Brave et al that the personality of the user influences audience interactions. (Brave, S. Nass, C. 2003 p81-96) 75% of participants in Riga took part multiple times; this was a lower percentage in Berlin at 46%. The majority of participants at 75% believed that the results were different each time; a smaller majority in Berlin corroborated this at 54%. Again, 54% believed that they did not know the outcome before they started, with comments such as, “No because it spontaneously changes” and “Still I don’t know/ there is no such thing I guess”. The same majority of 54% in Riga confirmed that they did not know what would happen at the beginning, stating “No, only that it will be fun and interesting” and “No, was trying to understand where the “trick” is hidden”. 12.5% had a go because a friend or child was participating. 85% of people in Berlin thought they changed the end result, participants commented “Yes I tried to alter the result by interacting with the people” and “Yes I interacted with the people next to me, Riga reacted”. 77% of people in Riga thought that this impacted on other users, this was much lower but still a majority in Berlin at 56% with 37.5% believing that this impacted on other users, with comments such as “I motivated the children in Berlin to participate (swim, jump)” and “Ja, I animated the people in Riga”. 62% agreed that they played a role other than themselves in Riga compared to a minority of 46% in Berlin stating that it was dependent on scenery. One participant in Berlin said, “I was a floating half person (blue trousers disappeared)” another stated that they “felt like a child” which possibly reaffirms the playfulness of the piece and suggests a preconception that adults do not play or that the participant does not play as an adult. 62% in Riga confirmed that they played a role other than themselves with comments such as “[I] Played together with people from Berlin and depending on the situation.” A number of people commented that they played several roles “Played several roles and played along others”. The results on perception of self awareness were lower with 31.25% in Riga agreeing that they forgot themselves, 19% were lost in the role, this is contradicted by the next question (which may suggest misinterpretation of one of the question) where 81% in Riga said they forgot themselves with comments such as “Let myself to emotions, ideas and games” and a number of participants noted initial self consciousness with comments such as “At first I was self-conscious, afterwards I forgot myself”. 81% verified that they had played another role commenting, “Different, depends played along other participators”, and “More attractive than usual”. 50% said they took on another character stating “Indulged to the

fun”. In Berlin 46% believed that they had become unaware of themselves, one participant commenting that they were “captivated”, another that they “Consciously intercepted scenery” which suggests that they may have misunderstood the question it is possible that the meaning was lost in translation. 46% played another role, one person said “The role of the mediator” another “Not a defined role” and “Mario because of the visuals”. There was a low response rate to did you take on another archetype 30% did and 30% did not 60% did not respond.

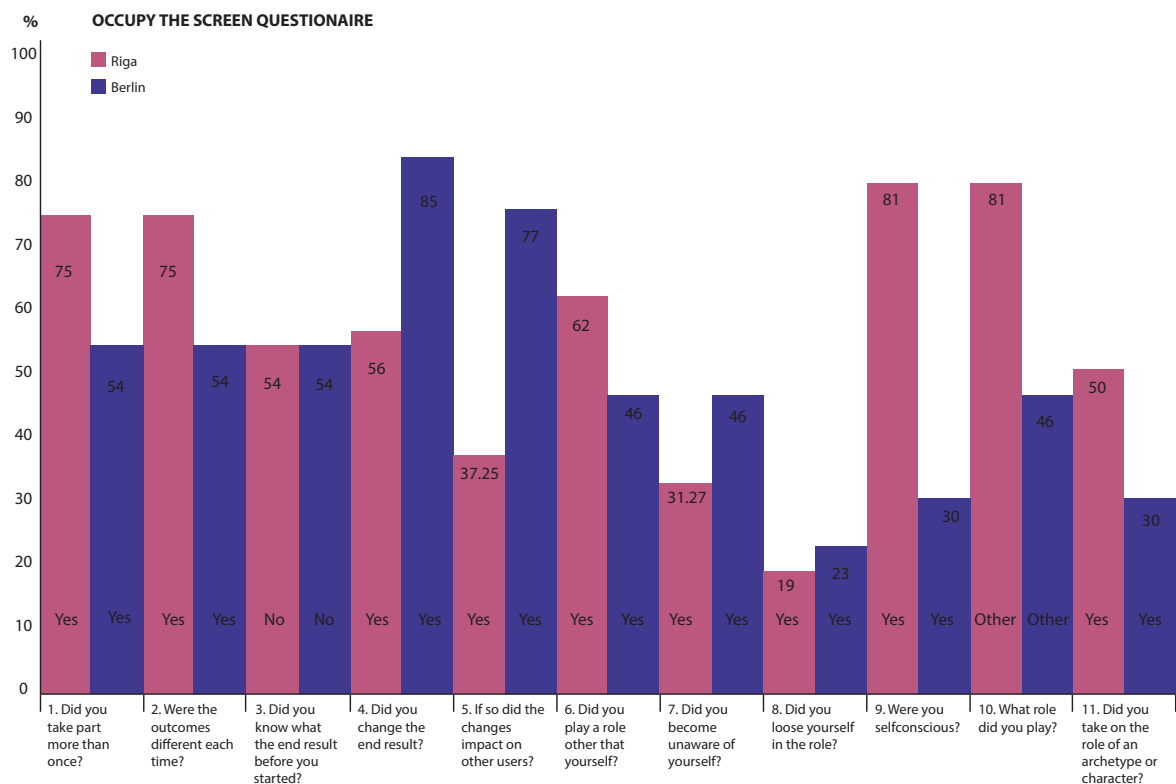


Figure 13 “Graph: “Occupy the Screen Questionnaire”

The evening scheduling of the piece, possibly further added to a sense of playfulness, as people walked through the park on their way out and back from bars and clubs. The installation ran each night in Riga (as it was two hours ahead) until one pm to co-inside with the Berlin timing of the festival; this may have enhanced playfulness amongst the audience. We introduced ludic or nonsensical elements at times such as a boat, which people responded to immediately by piling into. People of all ages took part and adults were as likely as children to engage, particularly because of the late showing. I observed an uninhibited willingness to play from children, which I also observed with adults, however

this response tended to be less immediate with the majority of participants. One girl played for hours engaging with the set, pretending to sit at the table, jumping into the tunnel, walking the plank etc. She engaged in a very performative way, with confidence and exaggerated movements. I also observed this advanced ability to perform in some adults as well as responding to the environments they tended to engage with others from Berlin, pretending to scratch someone's head, or hold hands in order to jump into the tunnel, or lift someone up from the pool. The remoteness of the installations appeared to give confidence to cross into personal space that might otherwise be seen as a physical invasion of space.

#### 4.8 “Screen Test” Staro Riga 2014

<http://charlottegould.org> -Website documenting Urban Screen installations



Figure 14 “Screen Test” Participants engage with the film scene on screen, November 2014 © Gould, C. Sermon P.

“Screen Test” was a site-specific work for “Staro Riga”, a festival of light taking place during the Latvian independence celebrations and as part of the European City of Culture 2014 programme of events. The work celebrated the history of cinema, with key moments recreated as sets with references to cinematic genres, containing converged scenes from the

history of cinema including George Méliès "La Lune", Robert Wieners "Cabinet of Dr. Cagliari", "Safety Last", Eisenstein's "Battleship Potemkin", "Casablanca" and "Vertigo". The installation took live oblique camera shots from above the screens of two separate audience groups in Riga, both located on large 40m<sup>2</sup> blue ground sheets, which then combined them on screen via a Chroma-key video switcher in a single composited image. As the merged audiences started to explore this collaborative, shared telepresent space they discovered the ground beneath them, as it appeared on screen as a digital backdrop, and located them in a variety of environments.

Through these playful environments the audience participants were offered the opportunity to direct and impact upon the outcomes of this installation through an open system of interaction. These unique transitory outcomes rely entirely on the roles and performances that the public participants bring to these urban screens and the experiences they choose to live out. Contextualised by their urban and commercial environments and recontextualised by a diverse array of interactive backdrops, the aim was to allow these public audiences the opportunity and agency to reclaim the urban screens.

This piece was commissioned by Riga 2014 to coincide with a film Festival talking place at the same time, so I was asked to produce sets relating to the history of cinema. The programming team had seen "Occupy the Screen" and wanted to bring this to the festival. Both projects were technically problematic because they were shown at night so involved delicate balancing in terms of light and shadow. However the biggest impact was the huge numbers of people visiting the event, which limited opportunity for the audience to engage with the interface, as for the majority of the time, there were so many visitors that the screen was full with people, with no environment visible. The work was presented for five nights and my methods involved observation as well as capture of the lineout video, which was scrutinised after the event, with key moments documented with time code as well as documentary photos and video footage. Each day as part of my methodology, I altered the environments, having observed the previous nights running of the piece, enhancing the elements that had triggered a proactive response from the audience.

I had already found during the exhibition for "Occupy the Screen" that sound was very effective in drawing people into the work and giving people confidence to engage, the audience often broke into spontaneous dance, when a familiar or catchy tune came on. The

size of the crowd impeded opportunity for play and while the screen was full with bodies, movement was restricted, so people tended to stand and look and photograph themselves, some times jiggling to the music. A participant commented at one point that it was like a group “selfie”, (to my distaste as this was in direct opposition of the intension of the installation). The line out videos during this time are reminiscent of Michel and Kenyon, when they filmed people leaving the factory gates, the subjects stood in the frame, observing themselves, posing, sometimes playing to the camera with dances, comical movements or performance, knowing that they would watch themselves again at the fairground, on payment to enter the tent two days later. In the same way, even when the screen was very full, people danced, and played with others. Direct contact, for example patting another’s head tended to take place between people at remote sites rather than in the same physical environment, unless they knew the participants that they had visited with. This may be because rules around personal space might become more flexible when physical touch does not actually take place.

The temperature dropped each night to below minus, and from my observations the cold also affected the way that people engaged with the work and the physicality with which they approached the piece. They tended to be very huddled in layers of clothing, which could restrict movement and appeared to influence a less mobile approach than observed in my other installations.

The work was commissioned to co-inside with a big upcoming film festival, so I was asked to create the environments referencing the film scenes and I had therefore not been free to make decisions around implementing the most successful environments from previous works. I think this has impacted on the outcomes as from my observations the audience was not as willing to play as they had been in previous installations, while the installation was very popular, with huge numbers piling into the space, they tended to be more static, watching the screen as a spectacle (Debord G. 1995) rather than engaging actively with the work and environments. This has proved a useful test of my methodology. It also meant that I was responding to others in terms of content development, as the Riga 2014 director had engaged with “Occupy the Screen”, two months earlier and had commissioned this work as a result. There are additional factors that could have impacted on the way audiences engaged with the work including the surrounding projection mapping artworks which acted as spectacle and do not require interaction. In addition the extreme cold

weather inhibited movement as one tended to draw limbs close to the body in order to keep warm.

For the “Occupy the Screen” work, I had found that questionnaires were intimidating to the audience so had decided not to use them for this installation however, I was also not permitted to undertake interviews and questionnaires as part of this festival and this was written in to the contract. For both of the works shown in Riga, helpers were employed, who were Latvian and they fed back to me that they did not know many of the films I had referenced, because Latvia had only recently started importing films from the West. This may have further impacted on the way that audiences engaged with the environments.

Central to the design of the artwork were the “Odessa Steps” from Eisenstein’s “Battleship Potemkin”. Eisenstein was born in Riga, so the commissioners highlighted the importance of including reference to this director. The concept focused around the idea of the sets being housed in a studio and the camera panning between the different scenes. I applied the research outcomes from previous projects on elements or objects that triggered proactive interaction with audiences, so that it was not necessary to be aware of the film in order to interact. It was not clear whether the audience knew the “Battleship Potemkin” scene, (Eisenstein, S. 1925) however there were some interesting scenarios where people improvised running down the steps, on a number of occasions there was a pram within the scene, and at one point a disabled woman using a walking frame, shouted with delight as she appeared to run with ease down the steps. This sense of liberation facilitated by digital works is echoed in Sherry Turkle’s study of online discussion groups, where she identifies that through the virtual people can be liberated from the confines of their body dictated through health, gender, age or race and in this way explore multiple-selves. (Turkle, S. 1995)

I mapped the outcomes from both my observations and from the line out video on to the data map that I have produced informed by Hans Scheuerl’s definition of games:

- (i) “Freedom”
- (ii) “Infinitude”
- (iii) “Closeness of the game”
- (iv) “Ambivalence”
- (v) “Virtuality” (*Scheuerl, H. 1965 p607*)

“Screen Test” offered the participants “Freedom”, no goal outside it’s self, as the audience was at liberty to enter the frame or leave as they wished and they often engaged in a series of ludic events. Instances that highlight this include [66] in frame 17:50 as three women (in their 20s) joined hands and moved out of the frame in a synchronized corps de ballet action. [67] In frame 18:08 the corps de ballet dancers moved back into the frame having exited and entered twice. People were free to stand and watch themselves, dance and move or be inactive as they wished: [68] in frame 17:25 a number of people entered the frame and stood in a line looking at themselves, a boy (bottom right of the screen) danced frenetically. [69] In frame 18:36 a woman (in her 30s) held her arms up in a pose to be photographed by her companion who was off screen. [70] In frame 19:28 a crowd gathered at the bottom of the screen, a man bottom left gestured to prod two girls posing for a photo in the centre. [71] In frame 19:58 a group moved into the right hand side of the screen, waving their arms and dancing. [72] In frame 20:16 a man at the centre, back of the frame blew kisses to the screen.

Examples of “Infinitude” where the ending was unpredictable, included the following sequence: [73] in Frame 21:01 two men in their 20s danced centre stage, one of the men waving his arm frantically. [74] In frame 21:11 a man behind also in his 20s waved his arm behind the other man who was dancing energetically. [75] In frame 22:28 the man gestured to lean his head on the other man’s shoulder, and then in [76] frame 22:45 the man gestured to hold the other man’s shoulder. [77] In frame 23:12 a man with a luminous safety jacket gestured peace signs behind both men’s heads. [78] In frame 23:27 more people moved into the frame and took photos and waved. [79] In frame 23:37 a man in his 20s gestured to touch a girl’s hat from the other side in Riga. [80] In frame 23:53 man standing above the two men dancing gestured to poke the man on the head, the other man below held his finger up to poke the man in his 30s up the nose. [81] In frame 24:38 the man behind in his 30s moved forward, and appeared to know the man in his 20s, gesturing to strangle man in his 20s. Unexpected events include in [93] frame 32:32 a boy with a sword, ran around the crowd in a circle around the edge of the frame. In [94] frame 33:03 a girl danced and held a pose (top left) as if she was standing in the window frame of building and in [95] frame 33:41 a group of teenage girls, companions together on the same site, pulled each other’s hats off.

The participants were not restricted by rules or the “closeness of the game” and had a large amount of freedom as demonstrated in the examples above, particularly because the crowd was so large that most of the time they could not see the environments. Other examples include jumping, which children often did when entering the frame: [4] Frame 01:20 a girl at the bottom of the frame, in the front jumped up and down. People were at liberty to bring in their own props, even carrying children and pets into the [5] frame such as in 01:21 a woman (in her 30s) held a small child who was holding a windmill. [6] In frame 01:37 a man (in his 30s) carried a small boy into the frame while a woman exited with small girl. [7] In frame 01:39 having put the boy down in the front of the frame a man waved an object. [8] In frame 01:56 a man in his 60s, (at the bottom left of the screen) stood with a small dog under his coat. [9] In frame 01:57 a small girl stood top right holding a sparkling windmill in the air. [18] In frame 04:37 a girl walked into the frame with a flashing bow in her hair, and watched herself in the scene. In [19] frame 05:29 a boy brandishing a flashing sword and a girl with a flashing bow entered the frame. When the environments were visible people responded to them, such as in [10] frame 02:38 a man (in his 30s) stood with both of his arms up perhaps gesturing to hold the clock hands in the “Safety Last” scene, although he was in the wrong position due to numbers of participants. People were also free to interact with each other and did with small gestures such as in [13] frame 03:21 a man in his 30s waved a stick and gestured to tickle a child’s head on other site and in [16] frame 03:54 a child gestured to stomp down the Potemkin steps. Later in [96] frame 34:17 people gestured to dance down the Potemkin steps including a teenager and dad, two children, and another man, as a boy walked up the steps with his back turned towards the camera, in [97] frame 34:33 a girl (approximately 8 years old) gestured to run down the steps.

“Ambivalence”, or movement between rule and chance include examples of people responding to the environments or to each other such as in the following sequence: [98] In frame 35:35 three boys and two girls danced on the disco floor. [99] In frame 36:02 two women and a man join them, dancing to Saturday night fever, [1a] in frame 36:17 more people gathered on the disco floor, (this included three women in their 20s, three men in their 20s and three teenagers. In [2a] frame 36:56 after a scene change to the sound of music two women and four children moved into position to stand on the hill. A boy launched his arm straight above his head in to the air and held the pose. In [3a] frame 37:10 a man in his 60s and a woman in her 60s moved in to the frame and stood pointing at

the screen. After a scene change [7a] in frame 40:03 a boy danced on the banister of George Méliès cannon stand. [8a] In frame 41:25 the screen was full of people gathering in Rick's Café, some waved, children jumped, and took photos. In [9a] frame 42:10 people gathered on the vertigo steps, a girl and a woman in her 40s danced together, the girl swung under the woman's arm. In [1b] frame 43:37 people gathered on the stand in grease, [2b] and in frame 44:06 a girl of approximately ten and woman in her 40s entered the frame dancing, a woman in her 30s and a child joined in the dancing.

Examples of “virtuality”, or separate from “real life” and the self include, ludic examples such as suggestions of unusual characters prompted by props such as in [21] frame 06:26 young teens one with a flashing sword and another with a flashing bow in her hair, took photos of their image on screen. Also I include examples of play across remote sites, which explore our relationship with the virtual body [22] such as in the following sequence: in frame 07:14 two children aged 10-12 gestured to grab a man on the other site. In [23] frame 07:24 the man moved out of the way and back again, the children tried again to grab him. [24] In frame 07:48 a teenager crept behind the legs of a man at the alternate site as if hiding. [64] In frame 17:11 a boy superimposed his head on to the face of the man on the other site and moved to dance. [65] In frame 17:41 a group of children in the foreground danced, two men and two woman linked arms dancing, while two men in their 20s (who were brothers) but standing on two different sites gestured to hold hands.

From my observations, people are less inhibited and are more likely to interact with strangers when interacting with those on a remote site such as in [34] frame 11:19 a man entered the frame and bent down to reveal a woman in her 30s with a sparkling bow on her head another [35] man in his 30s hovered his hand above another man's head. In frame [38] 11:42 a man ran in across the screen and gestured to stroke another man's head, (he was on the other site). In [39] frame 12:00 a man gestured to touch a boy's head (again on the other site) while another man behind him gestured to touch his head. In [40] frame 12:25 a man in his 30s continued to gesture to touch the boy's head, at the same time the boy bent his head down low to get out of the way. In [41] frame 12:28 the man (in his 30s) reached to catch the boy. [42] In frame 12:33 the boy swayed sideways to get out of the way. Another sequence includes in [28] frame 09:32 a woman in a white coat started to dance. [29] In frame 10:11 a woman in her 30s walked into the frame with a drink moving backwards to navigate across people on site two. In [30] frame 10:13 a man held out his

hand to touch her head, in [31] frame 10:20 another woman in her 30s side stepped across the screen and across the people on the other site, holding a drink and laughing. In [32] frame 10:39 another woman in her 30s joined her and they both danced from side to side, finishing [33] in frame 10:46 when a man in his 30s holding a drink joined in with the dancing laughing, and holding out his arm to prod a man on the other site.

The impact of the “Staro Riga” Festival on the installation and the way that people engaged with the work was significant due to the sheer size of the crowd. For the majority of the time there were so many people the environments were not visible through the crowd. Many of the other works in the festival involved projection mapping onto building facades as well as a carnival procession. Some of the projections were interactive, games, but were closed systems of interaction (a preset game with a variety of options available through point and click). The festival was very much about spectacle, a celebration of light as the cold winter began in Riga. There appeared to be an expectation on the part of the crowd to be entertained, to watch a spectacle, built up I suspect, as a result of navigating through the other events in the streets of Riga. This influence of the surrounding environment on audience behaviour was also observed in other works such as in “Picnic on the Screen” at Glastonbury where the events adjacent to the running of the installation had a large impact on the way that the crowd engaged with the work. At one point when the rugby had just been showing on the screen, we had to delay showing the piece, because the crowd was too huge and unruly, having been enthused by the game.

In “Occupy the Screen” I had found that the anamorphic backgrounds and optical illusion worked well to trigger audience play. For “Screen Test”, while the music encouraged dancing (or swaying) when the audience could see the film scenes, they triggered play, such as the piano in *Casablanca*, (Curtiz, M. 1942) people interacted with each other but however, the incidents were more subtle, possibly because of space, there were less elaborate incidents of play involving interaction with the environments than in previous works. This was partly because of the volume of people on set, but may also have been because the representation of the film scenes suggested reference to the semantics of the stage or silver screen, suggesting that people should act, which may have inhibited the audience. Alternatively the reliance on shared narrative, known actions that take place in certain scenes there may have suggested an implied “right and wrong” way of doing things and again this may have made the audience feel inhibited, self-aware or unqualified to

perform. This conclusion aligns with Csikszentmihalyi and Bennett's definition of play, which suggests that in order to play people need to feel equip to complete the task and free from anxiety so that they can forget the self. (Csikszentmihalyi, M. Bennett, S. 1971) In "Screen Test" the audience, appeared to be more confident to dance on screen, responding well, for example to the silent movie music, often exaggerating comical movements. Over the five days that the piece was presented, I developed more references to musicals to include the dance floor from "Saturday Night Fever" (Badham, J. 1974) as well as the sound track. This proved very popular; again I observed that people felt more confident to dance than to act out a role, whether on the Moroccan influenced dance floor in Casablanca or on the flashing disco floor of "Saturday Night Fever". Through my on site observations and through watching the lineout video, no one carried another participant to the rooftops in "The Cabinet of Dr. Caligari", (Weiner, R. 1920) or toppled on the window ledge of "Safety Last" (Newmeyer, F.C. Taylor, S. 1923) either because they felt too inhibited, with the large crowd observing them, alternatively it may have been because the audience did not know the films. However by drawing attention to this I am implying a right way of interacting with the installation and this reaffirms that perhaps there was an assumption that without the music there was a correct and incorrect way of engaging with the work. However, the logistic were such with the cold and the huge crowd that it was very difficult to find space on the screen to interact. Roy Ascot proposes that observers should be excluded from interactive installations, so that only participants are present, thereby eliminating the potential stress of being an object of focus from others, and encouraging all parties to actively engage to form a vantage point. This of course was not possible in this particular environment, as part of the "Staro Riga" Festival, and would have run contrary to the purpose of engaging a public audience within a public space. I did however, experiment with different ways of encouraging active participation. This experience of observing a large crowd in an interactive work as passively observing the spectacle of their mirror image on screen, is also borne-out in by events that unraveled during the showing of "Hole in Space". (Galloway K. Rabinowitz S. 1980) On the final day of presenting the piece the media had advertised the event prompting huge crowds to attend. Where on the previous three days of showing the artwork people had engaged with games and play, on the final day the huge crowds resulted in waving and shouting to recognized parties.

Towards the end of the evening in "Screen test" as the crowds dispersed, more opportunity

was presented for participants to engage with the environment and one woman in her twenties who was clearly a performer, (with exaggerated movements and no sign of self awareness) engaged for a long period of time responding to the environments and also with the other participants, making playful and dramatic gestures with her body. Children were also uninhibited to engage on screen, jumping and playing. There were a number of people with special needs who spent a long time enjoying the work, reaffirming the benefits of an open, intuitive interactive system, which can transport people to a third space where the impossible is achievable, illustrated by a disabled woman who, full of delight, appeared to run down the Potemkin Steps. I observed that children often approached the installation in an uninhibited manner ready to engage with the make-believe, and that adult participants would join in. This maybe a result of public perceptions around play, that it is permissible for the child to play but not for the adult. Projects such as this aim to breakdown these conventions, to offer an alternative space on screen, separate from everyday life, aiming to offer opportunity for creative play and engagement. Marc Piesberger reaffirmed this idea of the importance of the third space for creative collaboration in the development of creative spaces at the Riga 2014 conference. (Piesberger, M. 2014)

## 5 Evaluation and Conclusion

The documented effects of the Big Screens are both positive and negative and there have been examples of social disobedience which have developed around urban screens, such as the riots in Vancouver (15<sup>th</sup> June 2011) after the local ice hockey team (the Vancouver Canucks) lost to Boston in the Stanley Cup finals and this has instigated much discussion by Canadian local government about urban design and the social need for urban gathering spaces and on how social order can be maintained. Alcohol and boredom have been blamed for the riot and it has been reported that social networking provoked and ignited it. This demonstrates the way that the digital infrastructure connects us to time and space and our communities and how social networking can be used as a promoter of action, which can of course be used to a positive or negative end. The nature of the event will attract different audiences, whether it is a sporting, music or cultural and this can indicate the demographic as well as the size and nature of the audience. Urban Screens have also been used in the past to contribute towards the social good as a platform to promote social harmony, and in 2008, the Federal Government of Australia used the big screen in Sydney to stage a public apology to the Stolen Generations. In addition urban screens have created public interest through subversive intervention, albeit accidentally, when a pixilation error on the MediaCityUK screen showing the BBC Breakfast show in 2013, resulted in Nigel Farage appearing to sport a Hitler moustache.

The role that art practice plays in developing a sense of place is complex, and when Shelagh Delaney, author of “A Taste of Honey”, set in Salford in the 1960s, was interviewed for the BBC documentary “Monitor”, in 1960 (Russell, K, 2010) she was critical of the demolition of the red brick terraced housing in Salford, arguing that communities were being dispersed and moved far away “to sterile places” and that the local council “never think of putting anything like a theatre there.” This underlines the important role that culture plays in creating communities. Mirjam Struppek however warns that “place-making” through a process of gentrification can have negative repercussions on existing communities, moving them into the outskirts and away from the upwardly socially mobile areas. Struppek highlights the uncomfortable role that art can play in this process and denotes the importance of consultation with the local community, identifying a number of proposed screens, which met with antagonism, due to the public’s

resistance around the idea of public engagement projects as a precursor to regeneration. (Struppek, 2006) Patrick Allen proposes however that site-specific content for urban screens with participants relating to real space can “subvert the global and homogenised world of non-place”. (Allen, P. 2008, p34) My research suggests that the involvement of the public in outside cultural events offering a diverse range of views and perspectives can, as Audrey Yue suggests, “add value to place” by drawing in new audiences (Yue A. 2009 p264) offering new ways of engaging with the public in the urban environment. Big screens were erected across the UK across twenty-two cities including as part of the recent urban development in Salford Quays at MediaCityUK, built with public money but to the specification of Peel Holdings. On occasion, it has been used for cultural activity but it is largely used for news and sport. As a result of the financial crisis the BBC relinquished control of the screens across the country in March 2013, to the site owners, usually the City Council but MediaCityUK, is privately owned by “Peel Holdings”, therefore they have taken over control of the screen. One of the specifications of the screen at MediaCityUK which differs to the other BBC sites is that there is a cost for plugging computers into the screen as the port, a requirement for interactive artworks, which is inbuilt in all of the other screens, and has to be brought in manually, a service which is free on all other screens, but costs £5,000 on each occasion at MediaCityUK.

My research on interactive artworks for large urban screens suggests that the screens can offer potential for the public to co-create so that their use becomes more egalitarian, as this is not about permanency or ownership but about programming and meaningful opportunities to contribute to the content of the screens. Interactive works offer the public an on-going infrastructure from which to engage and have a voice, however as I have demonstrated through my methodology, using the “open/closed framework”, there are different categories of interactivity some more open than others and often programmers are unaware of the different impact that these works will have on audience agency. The potential for urban screens in terms of public engagement is currently operating at an all time low, as a result of cuts in spending and the relinquished responsibility of the screens, and the subsequent de-professionalisation of their curation in the UK. However, even at the height of their development, the screens tended to be curated by those with a background in television programming rather than a specialism in interactivity which again I suspect had an impact on the types of work that were selected for presentation. My research suggests that the projects exhibited were more about the spectacle and were used for public

viewing of events, such as sport and this is evidenced by the BBC Big Screens Facebook site, <https://www.facebook.com/BBCBigScreens>, where 98% of the projects recorded involved sport or sometimes, public screenings of music or dance. One interactive project that was documented was Chris O'Shea's "Dash Dodge Dive" (O'Shea, C. 2009) where if users from remote sites selected a game simultaneously, they could pitch against each other. There are a number of international Big Screens set up solely for cultural activity such as in Linz and Sao Paolo, and in 2014 I was involved in workshops and events for the "Connected Cities" European bid in which curators from seven different European countries came together to explore opportunities for connections between cities. Again the curator's specialist background was not in interactivity. The focus during discussions were on offering audience opportunity to add comments on screen, in this way capturing the audience voice; with origins in dialectic art (Kester G. 2004) this is an opportunity for public engagement in urban spaces, offering agency.

Through my PhD research, I have developed a framework for open participatory artworks for urban screens to maximise audience agency through play, engaging the public in new ways in the urban environment, offering the public agency and developing events that create memory. I developed a number of interactive systems as case studies of interactive artwork for urban screens measuring levels of openness through a data map and from this I was able to define key characteristics, to provide a framework for open interactive systems for urban screens which can be applied by artists and curators in the development of new works for the screens offering potential pathways to impact in order to enhance public agency through participation of the screens and potentially to impact on future government policy.

I developed my research methodology using Hans Scheuerl's definition of games (plotted on the y-axis of the data map). (*Scheuerl H. 1965*) This was mapped against an x-axis that captured "open" and "closed" play. When deciding on the most appropriate terminology for mapping the openness or closed-ness of systems, I considered applying both Wiebel and Shaw's definition of interactive systems (Wiebel, P. Shaw, J. in Lovejoy, M. 2011 p18) and Caillio's (Cailliois R. 1958) definition of play using "ludus" (Goal orientated games) and "paidia" (free aimless play). However neither of the definitions offered a consistent solution for mapping onto a continuum. Open and closed play captured the criteria that I wanted to represent. I plotted instances from the timeline against the x/y co-

ordinates of the grid and found that many of the instances followed a trajectory on the x-axis represented as a vertical trail. This is because each action creates a dynamic which impacts on each category. This is a qualitative method as opposed to a quantitative method as it involves making a judgement based on a set of criteria evidenced through audience behaviour. The data forms a pattern that identifies characteristics for the open framework, which I outline below:

I found that the surrounding environment as well as weather, and the time of day impacted significantly on the way that the audience engages with the artwork, on the mood and the dynamic of the group. The Glastonbury participants were different in the morning than by mid-afternoon and evening, equally the mood changed in Riga between September and November, though different works, both installations were shown at night but the temperature had dropped to below zero degrees by November resulting in a crowd huddled in warm clothing and less energetic. Audience interaction then is transient and responsive to external stimuli. McCarthy et Al reaffirm this through their research they found that the way that the user interacts with the system depends on the emotional state of the user. (McCarthy, J. Wright, P. 2004) Brave et Al found that levels of interactivity depended on the personality of the user. (Brave, S. Nass, C. 2003, p81-96) I observed numerous situations where people from different demographic groups were more performative, more confident, more social, more inclined to make connections or to reach out to strangers and using more prominent gestures than the majority of participants; this could be aligned to a series of personality traits. This is borne out by research undertaken by Burmester, Hassenzahl and Koller who found that socially grounded qualities came from curiosity, pride and self-confidence, where as hedonistic qualities lead to individualism. (Burmester, M. Hassenzahl, M. Koller F. 2002 p32-40) Events that were part of a large public festival such as “Picnic on the Screen” (Gould, C. Sermon, P. 2009) and “Screen Test” (Gould, C. Sermon, P. 2014) attracted very large audiences, which at times limited opportunity to interact with the environment. However, it resulted in a confident audience, eager to engage, initially demonstrating excitement at seeing themselves on screen, before taking the opportunity to interact. Events need to be programmed so that they work together, and do not impact on each other negatively, the international rugby match at the Glastonbury Festival BBC Big Screen 2009, is an example of this, where levels of debris alone made it physically impossible to set up the installation.

Working with established user groups enhanced the quality of interaction and built confidence in public audiences such as in “All the Worlds a Screen” where the Madlab community and the Hangar.org communities engaged with the public, bringing along their own props etc. to contribute to the event. This enriched the narratives that evolved through unexpected props such as animal heads and picture frames. A Manchester based poet and performance artist also contributed to the work with readings and live improvisations. The remote sites encouraged more interaction between strangers, as participants did not have to navigate or avoid invading personal space through physical touch. Strangers would pretend to stroke heads, touch hands, and caress when on remote sites, playing with the optical illusion, where face-to-face people showed more inhibition. This did, however, impact on those in the same physical space who at times played with the pretence of virtuality, again gesturing to touch where this intimacy amongst strangers would be unusual. In this way the interactive installations offered a platform for sociability.

Developing compelling environments encourages the audience to want to take part. Through my artistic practice I employ a low-fi aesthetic, which combines the high-end super real of 3D environments and video with hand-drawn, handmade stylised graphics and objects, with heightened colours, presenting imagined other worldly spaces and utopias. Through my research practice I have found that symbols of “otherworldliness” can encourage adult audiences to play. Installations, such as “All the World’s a Screen” and “Picnic on the Screen” which comprise of ludic environments and props, signified both through the aesthetic and the scale (the micro and the macro) such as the giant cardboard teacups or dinosaurs and oversized toy cars, as well as the low-fi aesthetic, this represents an environment that is other than real life, in line with the characteristic of play defined as separate from real life (Callois, Huizinga, Scheuerl). This facilitates play to take place. Brian Sutton-Smith identifies nonsensical, ludic play as being a play characteristic, shared by adults and children. *“The play of disorder and phantasmagoria would seem to be a universal aspect of all free play, for both child and adult.”* (Sutton-Smith B 1999, p162) Adults can initially assume that public play is exclusively intended for children so the graphic language, the content, as well as the reference to the stage set or TV studio helps to frame the work as appealing to broad age groups in terms of target audience.

Opportunity for the unexpected is an important criterion of open artworks. Of the works that I developed for urban screens the most “open” in terms of offering distributed forms of

narrative, or “paidia” free forms of play, were “All the World’s a Screen” and “Occupy the Screen”. The openness of the system allowed for audiences to take the narrative in whichever direction they desired. The environments and props suggested a starting point, but there was room for interpretation and could be taken in other directions depending on the way that audiences interacted with each other. Audiences were free to rearrange the props as they chose, such as in “All the World’s a Screen”, when a dinosaur was moved unexpectedly in close proximity to the camera, so that it appeared to be huge in scale next to the participants. This work was not shown on an urban screen, but the location in arts centres facilitated easy access to props as there were objects around the studio that could be used creatively by the participants and they were also able to plan ahead, introducing costumes and other objects to the work, which resulted in a very inventive approach from the audience and facilitated collaboration between the public and myself as artist. The use of props in open systems allows for enhanced agency. “All the World’s a Screen” included a variety of props within the model set, so this further encouraged the use of additional objects. Similarly with “Occupy the Screen” the audience responded very positively when additional props such as a boat or character masks were introduced. In the urban environment the audience were less likely to introduce their own props, as they usually happened upon the installation while going about their everyday lives and had not pre-planned the visit, so would only have with them the objects that were co-incidentally on their person. This opportunity for open interaction encourages creativity, allowing for participants to direct the narrative and therefore the outcomes of this cannot be predicted. This assertion is supported by Beryl Graham’s research, which identified that the existence of a conversation between audiences will lead to heightened interactivity. (Graham B. 1997, p43) There is no sound in the case studies presented so participants rely on body language to communicate and freedom to take the resulting story in any direction leads to unexpected results.

The use of the physical body further facilitates participant freedom to take the narrative in unexpected directions; Patrick Allen asserts that the use of the human body on urban screens can help locate us in that space. (Allen 2008) I have found through my practice based research that the use of the body offers more freedom for self-expression in terms of communication facilitating opportunity for free play or “paidia” enhancing opportunity to introduce props and unexpected elements. “Picnic on the Screen” and “Urban Picnic” again allowed users to express themselves through their body. Participants

were free to introduce their own props but the environment of the picnic implied narratives around eating and drinking and suggested that the audience remain seated. It had a static background so that there was no change in scene and therefore no prompts to significantly change in narrative sequences. The animated augmented reality tags introduced an element of spectacle, which at times rendered the audience motionless, inquisitive to see which animation was attached to which tag. This may have been enhanced by the mystery meet nature of the interactivity. The augmented reality tags however, offered a way into the piece and a divergence when people may otherwise have felt embarrassed or shy, either as they entered the frame or when others left.

In “Ludic Second Life Narrative” and “Mirror on the Screen” the presence of the physical body was limited to the reveal inside the hut, or mirrors hidden within the space. “Urban Intersections” did not feature the physical body on screen. In terms of Caillois categories of play, these works fit more closely within “ludus” (goal orientated, rules with a skills focus), rather than “paidia” (free aimless play). When aligning to Caillois definition of games “Ludic Second Life Narrative” and “Mirror on the Screen” would fit more closely to “agon” (games of skill), “alea” (games of chance) as they are not only goal focused but involved skill to navigate the space and memory in order to navigate with efficiency.

Creating environments that suggest movement can trigger play. The anamorphic environments and optical illusion encouraged a very physical response to the artwork, which injected energy into the way that the audience responded. These works aligned with Roger Caillois’ categories of “ilinx”, thrill seeking games, which assault the senses, relating to the elements of optical illusion and specifically the anamorphic environments in “Occupy the Screen”, “Picnic on the Screen”, “Urban Picnic” and “Screen Test” fit into the category of “mimicry” involving role play and pretence. (*Caillois R. first published 1958, p128*) This provided a third space on screen, which offers exploration of the imaginary, the ludic and “phantasmagoria” as well as representation of the other. (Sutton-Smith B. 1997)

It is important to avoid breaking the concentration of the user and to consider how far the suspension of disbelief can be stretched to make the experience meaningful.

All of the installations aligned with Johan Huizinga’s definition of play, each installation was clearly defined as distinct from everyday life, and all offered the opportunity for

participants to become immersed in the activity, apparent both through observation of the lineout videos and verified by questionnaires. However, the levels of immersion in “Ludic Second Life” and “Urban Intersections” were affected by the lag on the motion tracking which inhibited “paidia” bringing participants back into self-awareness as they waited for the software to catch up with their movements. Participants were further restricted by the representation of the avatar. Again if motion tracking had allowed free movement of limbs as well as navigation through the space, real time opportunities for free play would have been enhanced. This is supported by Csikszentmihalyi’s Flow theory, that free, creative play requires a balance between ease to achieve a task, accompanied by appropriate levels of challenge or motivation. (Csikszentmihalyi 1975, 1997) The more intuitive the interactivity, the less intervention is required of the artist, and the heightened potential for audience agency. All of the artworks that I developed for urban screens enticed the audience with environments, which aimed to signify the playful through stylized graphics, so that the audience took an active decision to want take part with no barriers in terms of prerequisites. The works were made accessible by the instinctive interface but they also triggered response through suggestion of narrative or “topoi”. (Huhtamo, E. 2013) The most successful of the works did not imply a correct way of engaging such as “All the World’s a Screen” “Picnic on the Screen” and “Occupy the Screen”. Conversely, “Screen Test” referenced films, which the audience in Riga may or may not have recognised. Essential to offering an open framework is the avoidance of any suggestion of a correct or incorrect response. For the “Screen Test” installation the reference to a film set may have implied a specific narrative sequence from participants, which would demand specific acting skills and may therefore have at times inhibited the audience. From observation no one attempted to act out a part of a scene that would have been true to the script, although the crowds did engage with scenes which prompted active movement such as running down the “Odessa” steps with a pram on more than one occasion. People were most confident to respond to the musical elements, dancing or playing the piano at Rick’s Café, in the “Casablanca” (Curtiz, M. 1942) scene, or dancing to Saturday Night Fever.

Urban Screens offer significant opportunity for communities to engage through play. The screen’s position in the urban environment offers a chance to reach people from a wide section of the community, many of whom would not usually go to an art gallery, thereby optimising opportunity for social engagement across a broad cross section of the community. Richard Sennett promotes the idea that communities work together creatively

in order to encourage tolerance and social cohesion (Sennett, R. 2013) and Lucy Lippard proposes that a sense of place is created through a hybrid of layered experiences.. (Lippard, L. 1997) From this perspective playful installations on urban screens can offer opportunity to create events, which enrich public memory. *Roger Silverstone defines community as involving “a claim. It is not just a matter of structure, of all the institutions that enable participation and organisation of membership. It is also a matter of belief, a set of claims where effectiveness is needed precisely and only in our acceptance of them. Communities are lived and also imagined”*. (Silverstone R. 1999, p97) Silverstone presents play as an opportunity for a third space where the imaginary and real can combine. From this perspective urban screens could provide a platform for artworks and cultural activity, a third space on screen which provides opportunity for play, the imaginary, the creative, to offer an inclusive memory of place and to explore our sense of self as public participants. In our increasing networked cities and lives, our media is ubiquitous and pervasive, the urban screen is an ideal portal for this, described on the Connected Cities website as “a membrane between the digital and urban space”, urban screens can offer huge potential to promote communication and inclusive public engagement, potentially transforming our human experience in the urban environment. This framework for open art works on urban screens can enhance potential to offer agency, creative freedom and opportunity for collaboration with public audiences.

In summary, through my research I have developed a framework for open interactive artworks, which enhance opportunities for audience agency, defined as opportunities to make decisions and be creative. Open interactive systems can potentially transform the relationship of the public to the screen, from the passive audience immersed in spectacle, to a dynamic relationship between artist and participant, of co-producer and collaborator. I have developed a research methodology, which maps open and closed systems in order to offer a framework for participatory artworks for urban screens to optimise opportunity for audience agency, defined by Browning as “*the possibility of freedom, communication, comprehension and mystery.*” (Browning 1964) I have identified key characteristics to be considered in the development of open works for urban screens, which offer participation autonomy, include the following:

- The surrounding environment can impact on the way audiences engage with open artworks e.g. other events, weather, time etc.
- Dynamics can be established by user groups, which can reduce inhibition.

- Remote sites can offer increased “tactile” behaviour.
- Symbols of ‘otherworldliness’ or the ludic offer license for adults to play.
- Opportunities for the unexpected and unintended enhances agency.
- Opportunity for open narrative leads to heightened interactivity. (Graham B. 1997)
- Use of props inspire confidence, add to narrative and can connect users to the screen.
- Use of the body offers freedom of expression and increased agency. (Allen, P. 2008)
- Prompts to physical activity such as music or objects encourage participants to actively engage and become immersed in the activity.
- Ease of use/ intuitive interface eases interaction or flow. (Csikszentmihalyi, M. 1975)
- Avoid breaking the concentration of the user e.g. how far can you stretch the suspension of disbelief to make the experience meaningful?
- Compelling environments entice the audience to take part.
- Avoid the suggestion to audiences of a ‘right’ or ‘wrong’ response.
- Interactive installations offer a third space on screen combining the real and imagined so that play can take place.

Through my research methods I have focused on the body to develop a number of systems, which facilitate free play or “paidia”, a prerequisite for creativity. (Csikszentmihalyi 1975, 1997) The large urban screens across the UK have been handed over to landowners, usually the council; internationally there remain some screens, which focus entirely on cultural content. Even when the screens were run by the BBC curators, the focus often remained on news and sport, when culture was introduced the content tended to be public viewing events of music, concerts, animations or films. It was only on rare occasions that interactive installations were presented on the screens and they were often closed systems.

Through this study I have developed a framework to present key characteristics that can be integrated into the design for interactive artworks for large urban screens, which enhance opportunity for audience agency and collaboration, allowing for freedom of expression and creativity through play, in the creation of unique public events.

## **6 Appendix**

## 6.1 “Ludic Second Life Narrative” BBC Big Screen Liverpool 2009



Figure 16 “Ludic Second Life” Participants interact with the installation, 2009 © Gould

## **“Picnic on the Screen” Glastonbury Village Screen 2009**



*Figure 17 “Picnic on the Screen” Participants interact with the installation, 2009 © Gould, C. Sermon P*

## “Shangpool Picnic” Shanghai 2010

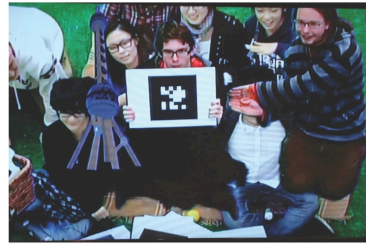


Figure 18 “Shangpool Picnic” Participants interact with the installation, 2010 © Gould, C. Sermon P.

## “Urban Intersections” Waterfront Building ISEA 2009

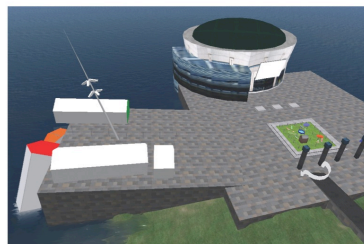
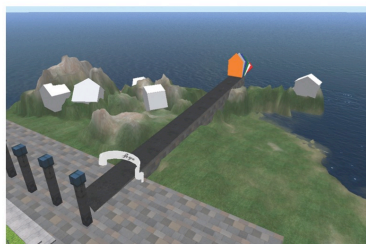
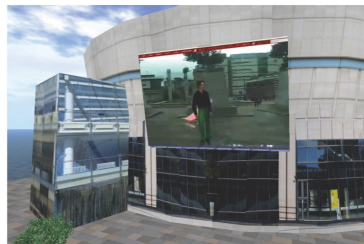
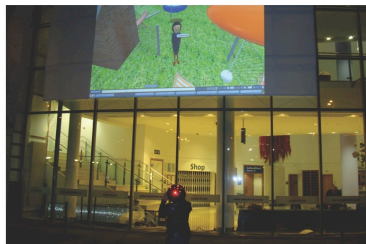
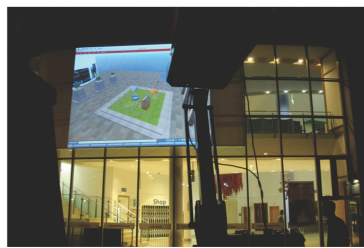


Figure 19 “Urban Intersections” Urban intersections environment, 2009 © Gould, C. Sermon P.

## “All the Worlds a Screen” Barcelona 2011



Figure 20 “Urban Intersections” Urban intersections environment, 2009 © Gould, C. Sermon

## “Mirror on the Screen” 2012



Figure 21 “Mirror on the Screen”, 2012 © Gould, C. Sermon P.

## “Occupy the Screen” 2014

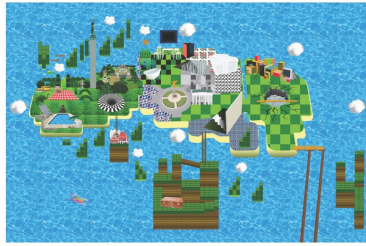


Figure 22 “Occupy the Screen”, 2014 © Gould, C. Sermon P.

## “Screen Test” 2014

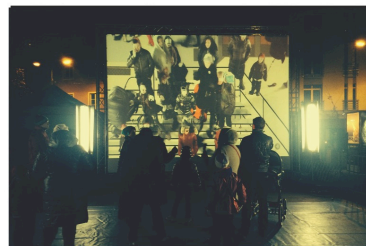
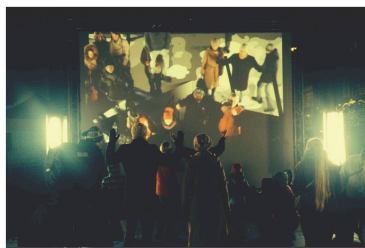


Figure 23 “Screen Test”, 2014 © Gould, C. Sermon P.

## 6.2 Ludic Second Life Narrative Installation Diagram

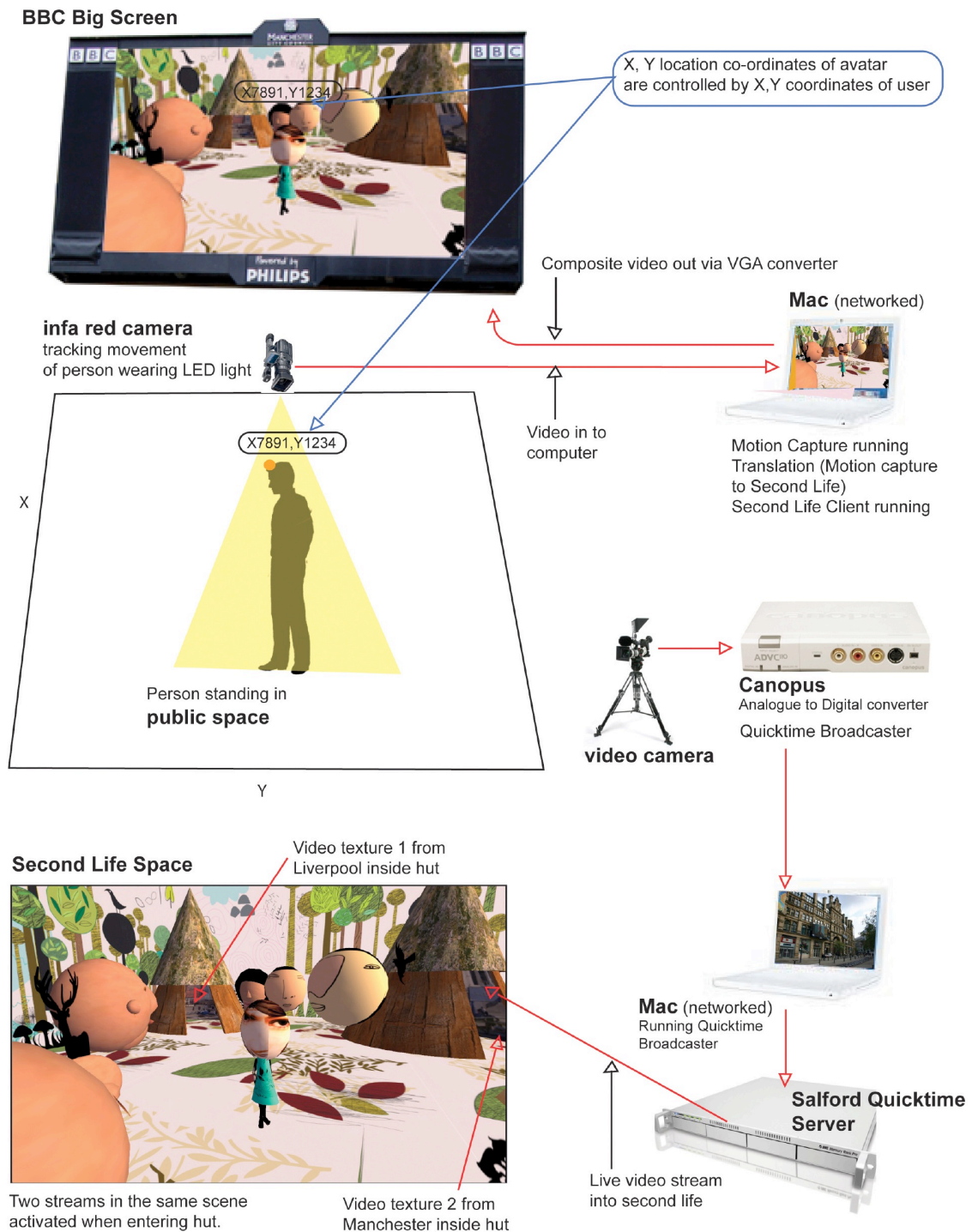


Figure 24 Ludic Second Life Installation Diagram

## Picnic on the Screen Installation Diagram

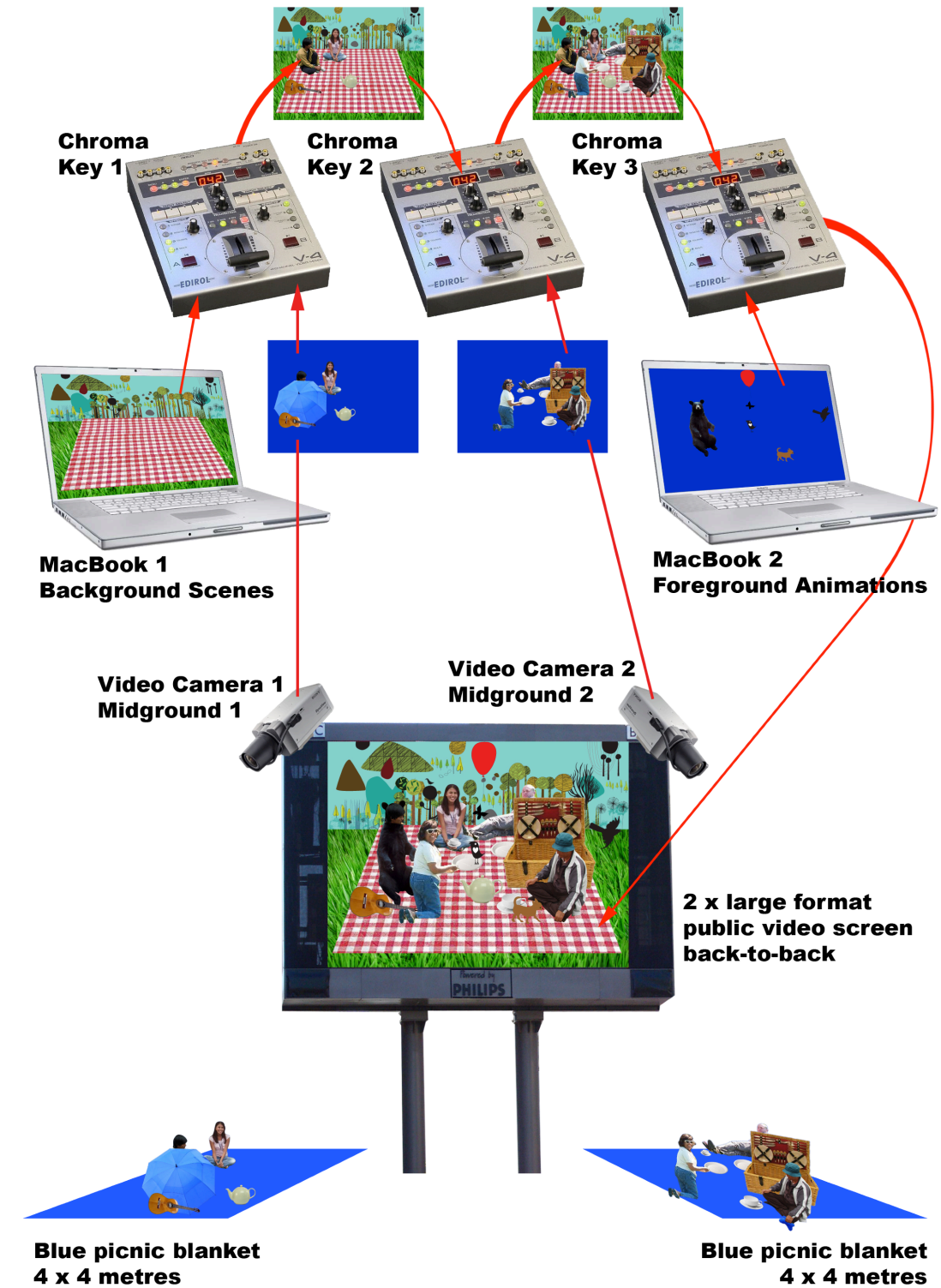


Figure 25 Picnic on the Screen Installation Diagram

## Shangpool Picnic Installation Diagram

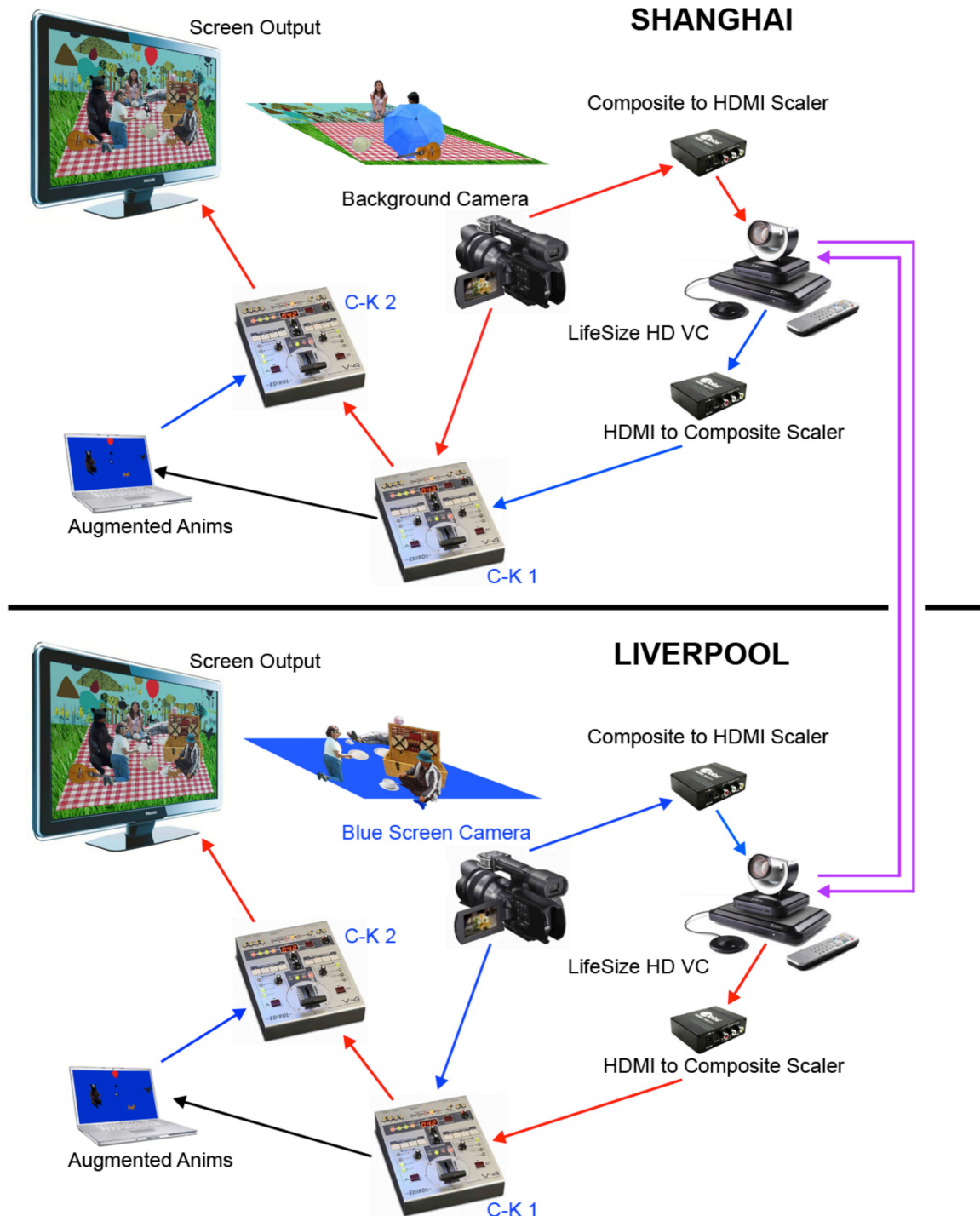


Figure 26 Shangpool Picnic Installation Diagram

## Urban Intersections Installation Diagram

### Video and Data Flow Diagram

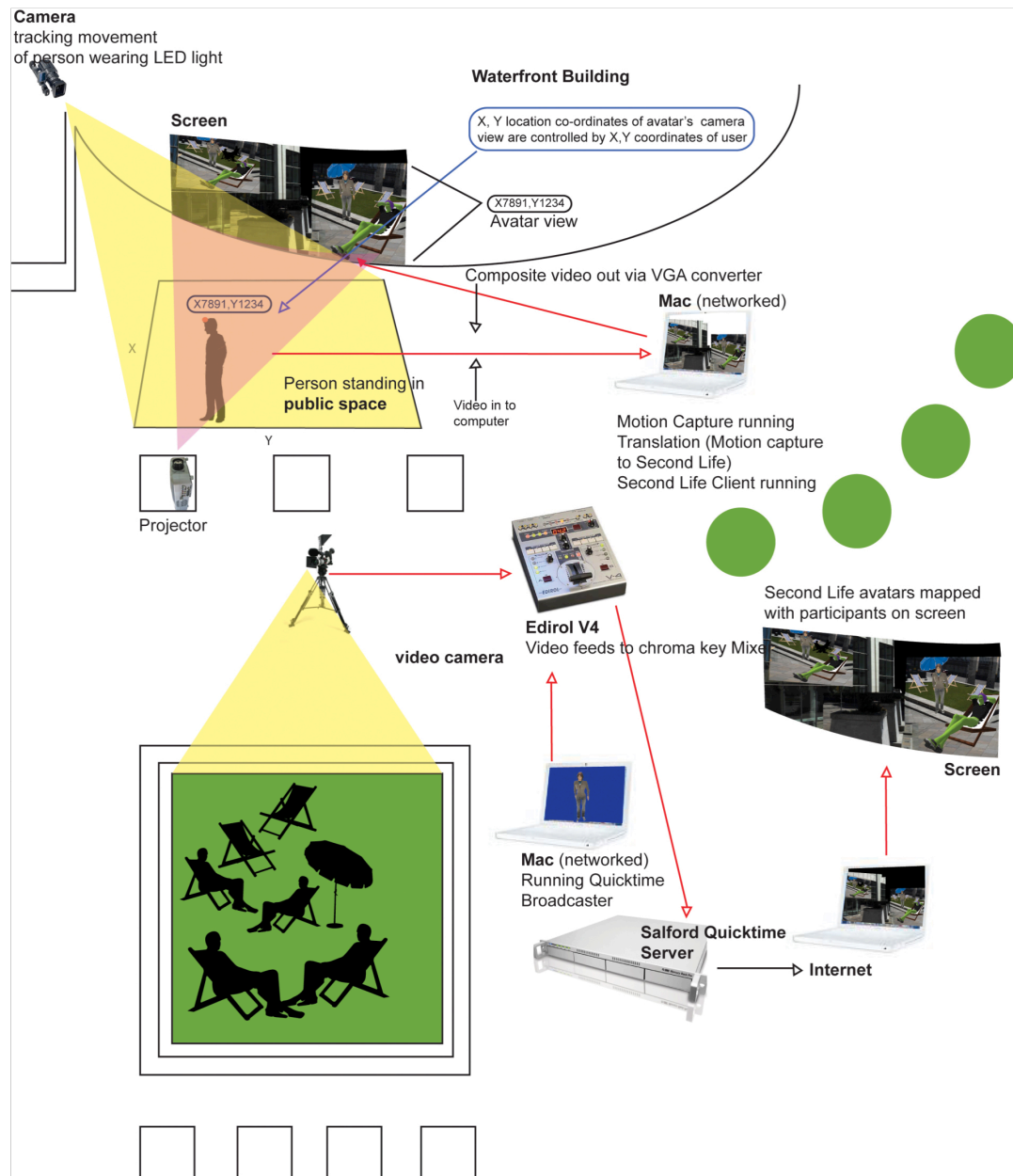


Figure 27 Urban Intersections Installation Diagram

## All the World's a Screen Installation Diagram

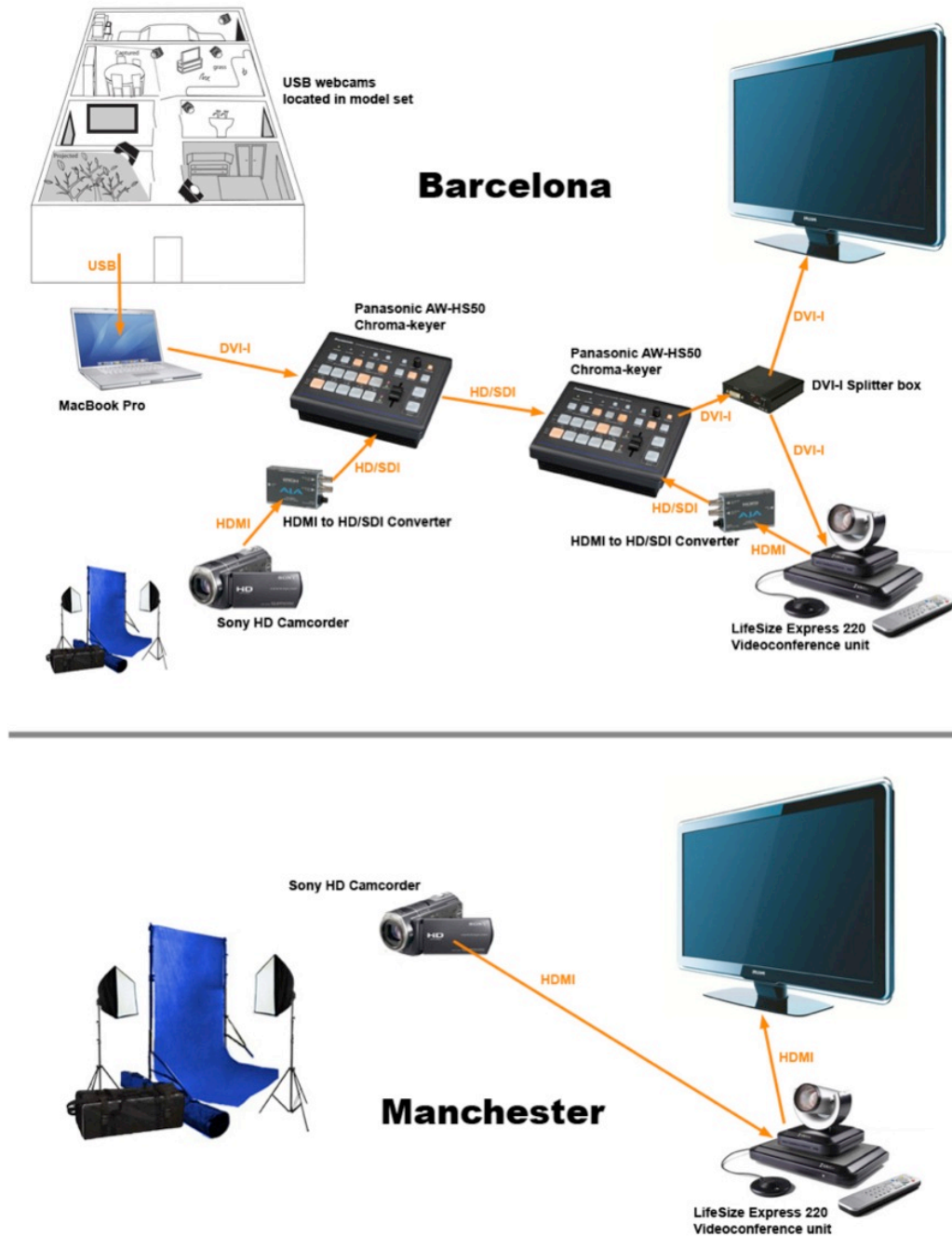


Figure 28 All World's a Screen Installation Diagram

## Occupy the Screen Installation Diagram

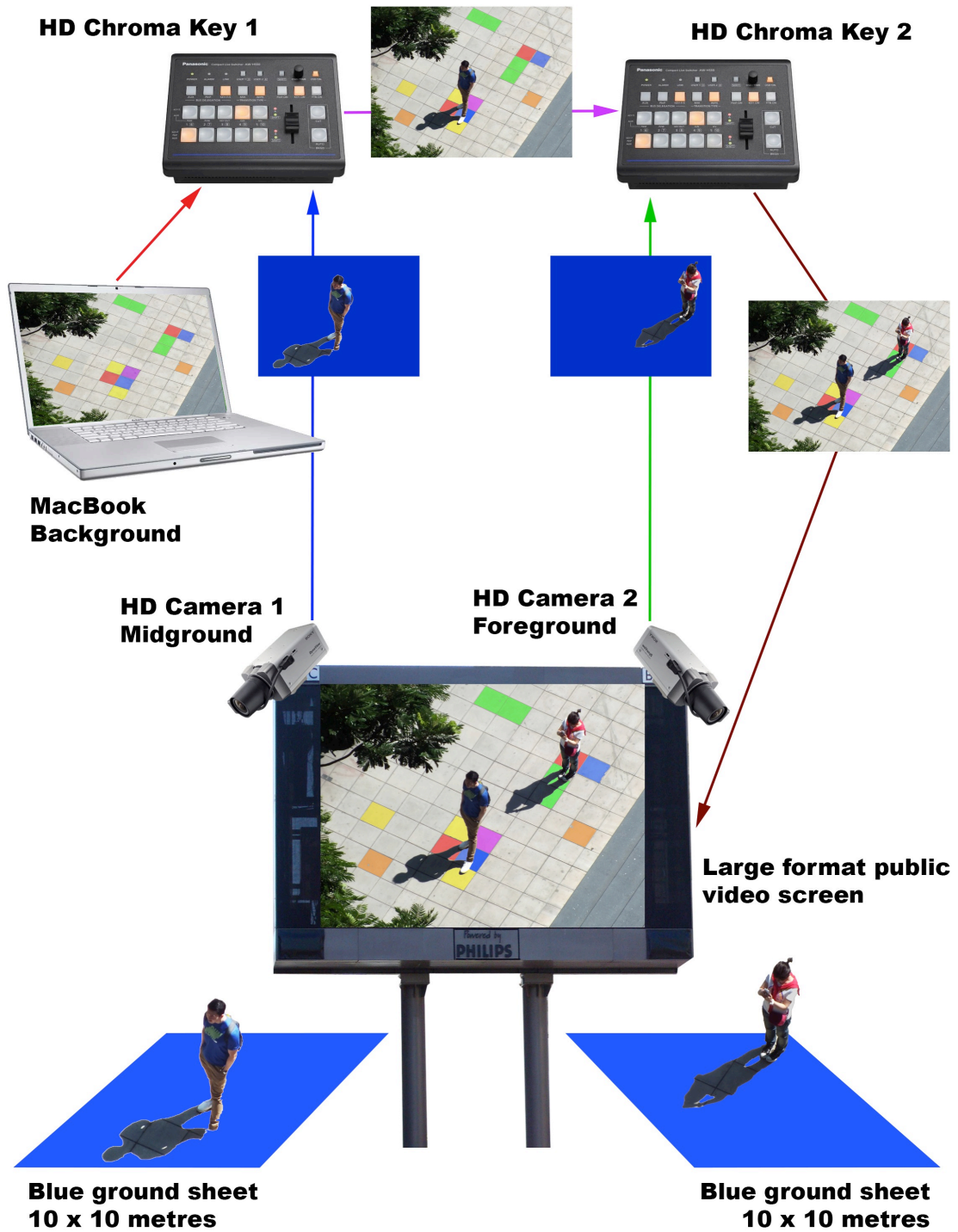


Figure 29 Occupy the Screen Installation Diagram

## 6.3 “Picnic on the Screen Open Closed Framework” (a)

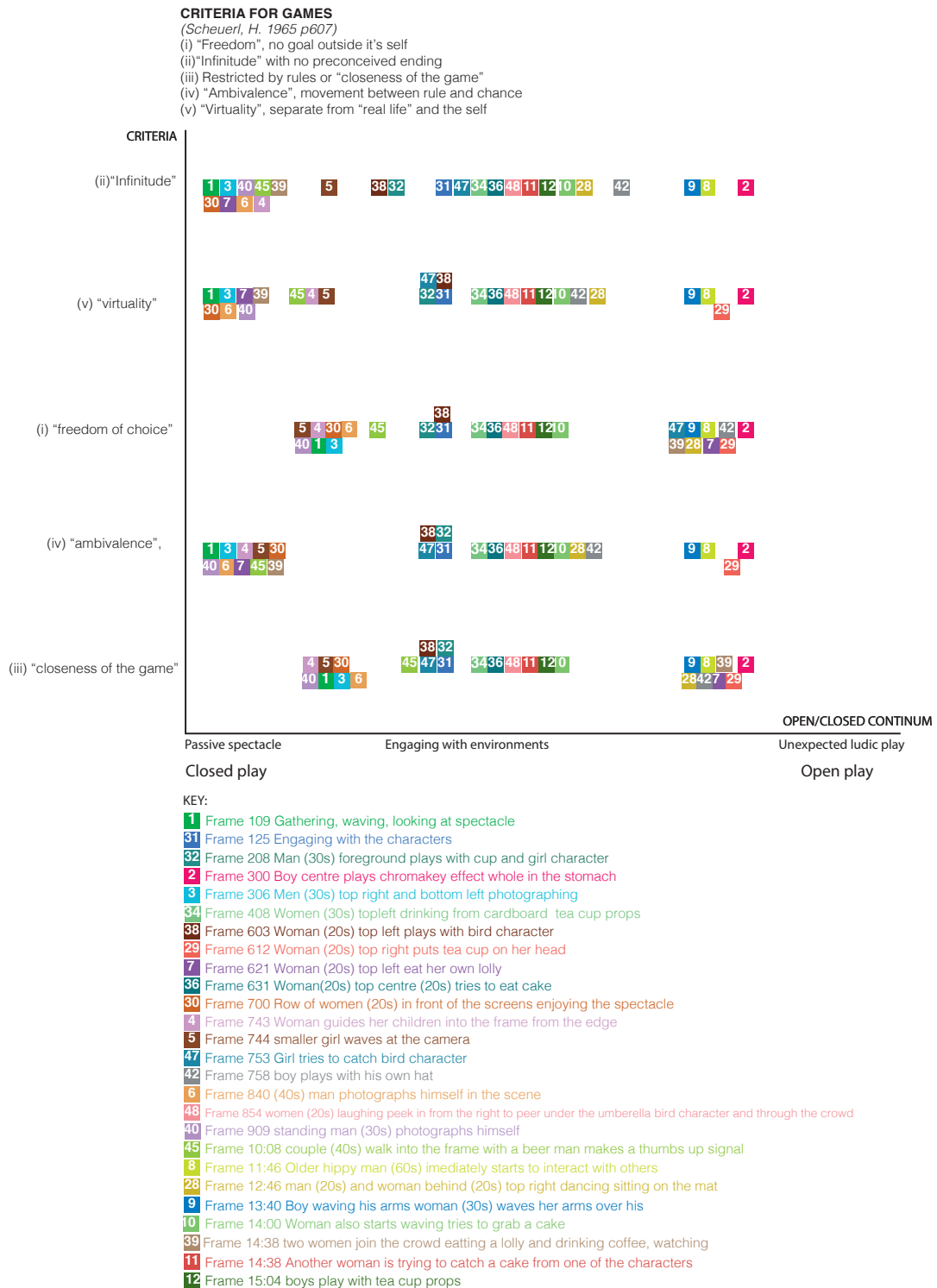


Figure 30 “Open Closed framework Picnic on the Screen” (b)

## “Picnic on the Screen Open Closed Framework” (b)



Figure 31 “Open Closed framework Picnic on the Screen” (a)

## “Shangpool Picnic Open Closed Framework” (a)



Figure 32 “Open Closed framework Shangpool Picnic” (a)

## “Shangpool Picnic Open Closed Framework” (b)

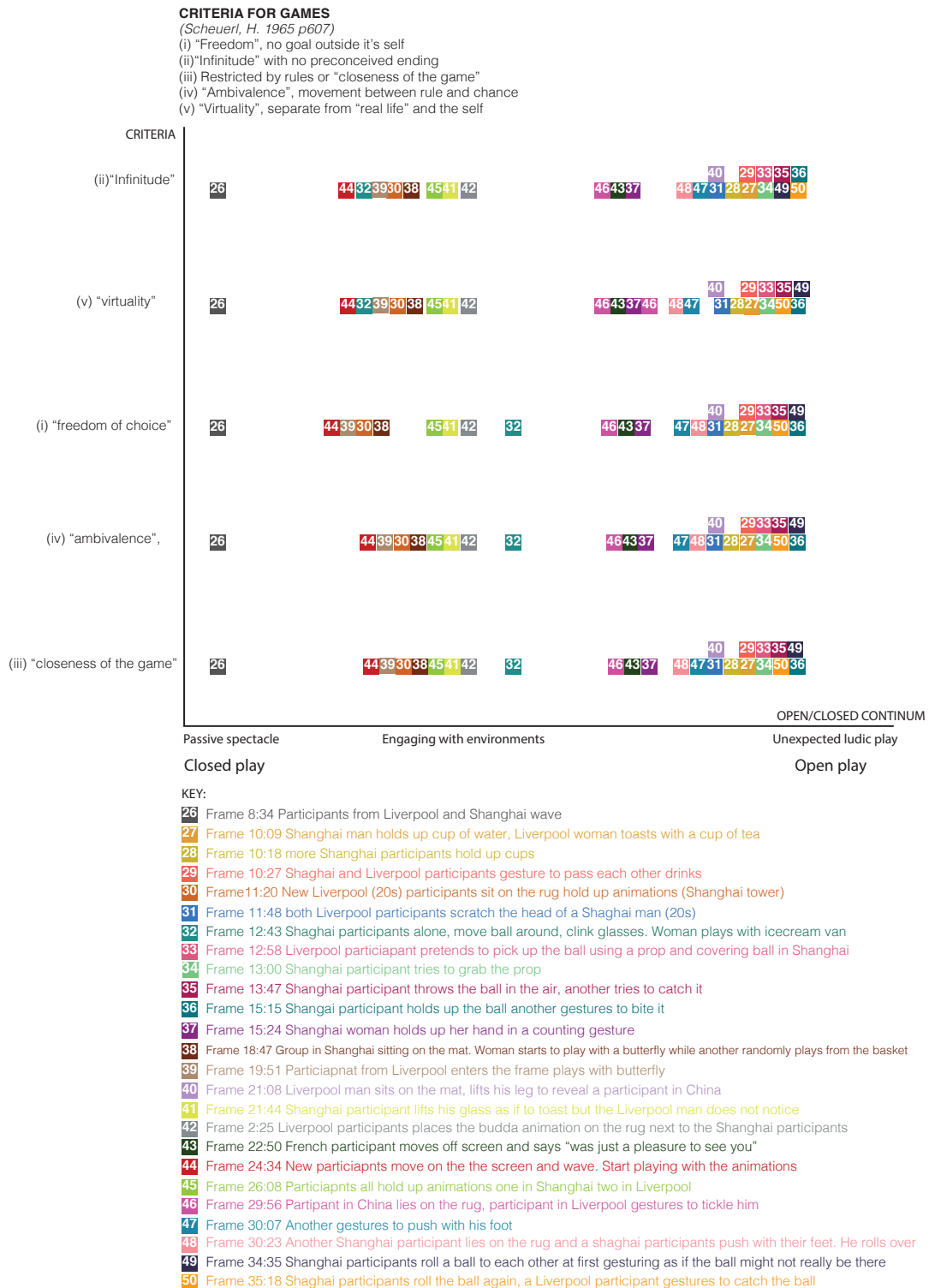


Figure 33 “Open Closed framework Shangpool Picnic” (b)

## “Shangpool Picnic Open Closed Framework” (c)

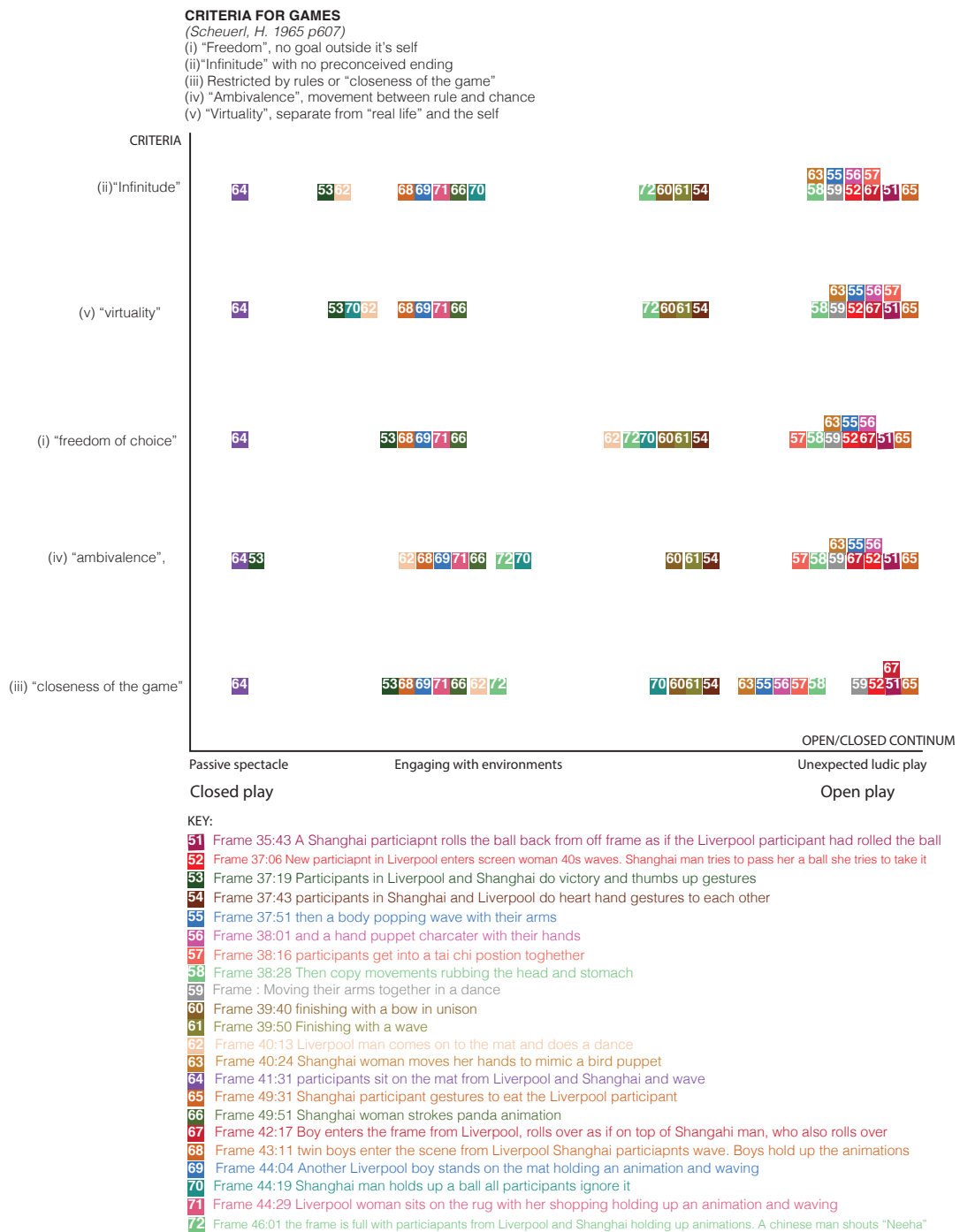


Figure 34 “Open Closed framework Shangpool Picnic” (c)

## “All the World’s a Screen Open Closed Framework” (a)



Figure 35 “All the Worlds a Screen” (a)

## “All the World’s a Screen Open Closed Framework” (b)



Figure 36 “All the Worlds a Screen” (b)

## “All the World’s a Screen Open Closed Framework” (c)



Figure 37 “All the Worlds a Screen” (c)

## “Occupy the Screen Open Closed Framework” (a)

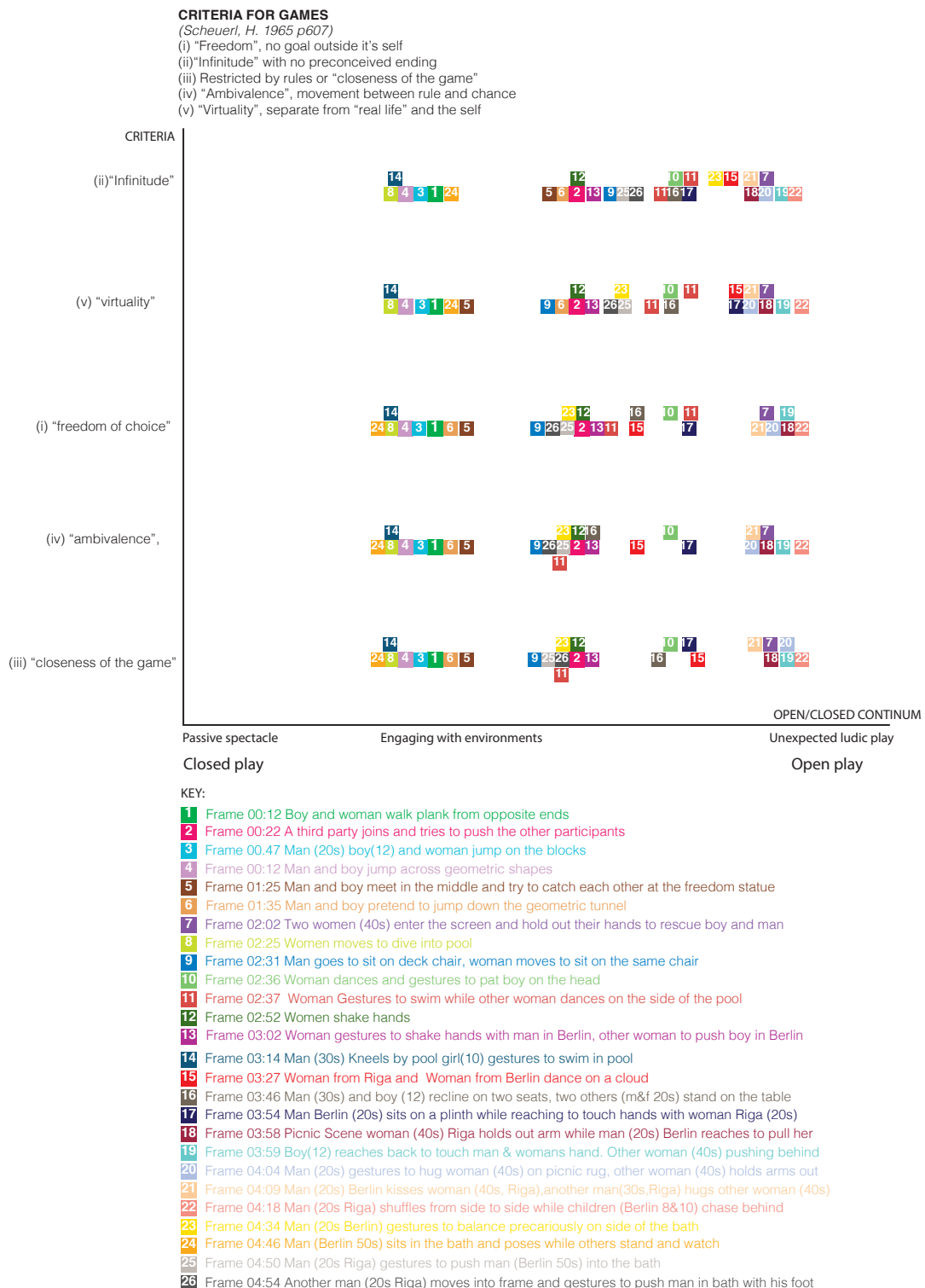


Figure 38 “Occupy the Screen” (a)

## “Occupy the Screen Open Closed Framework” (b)

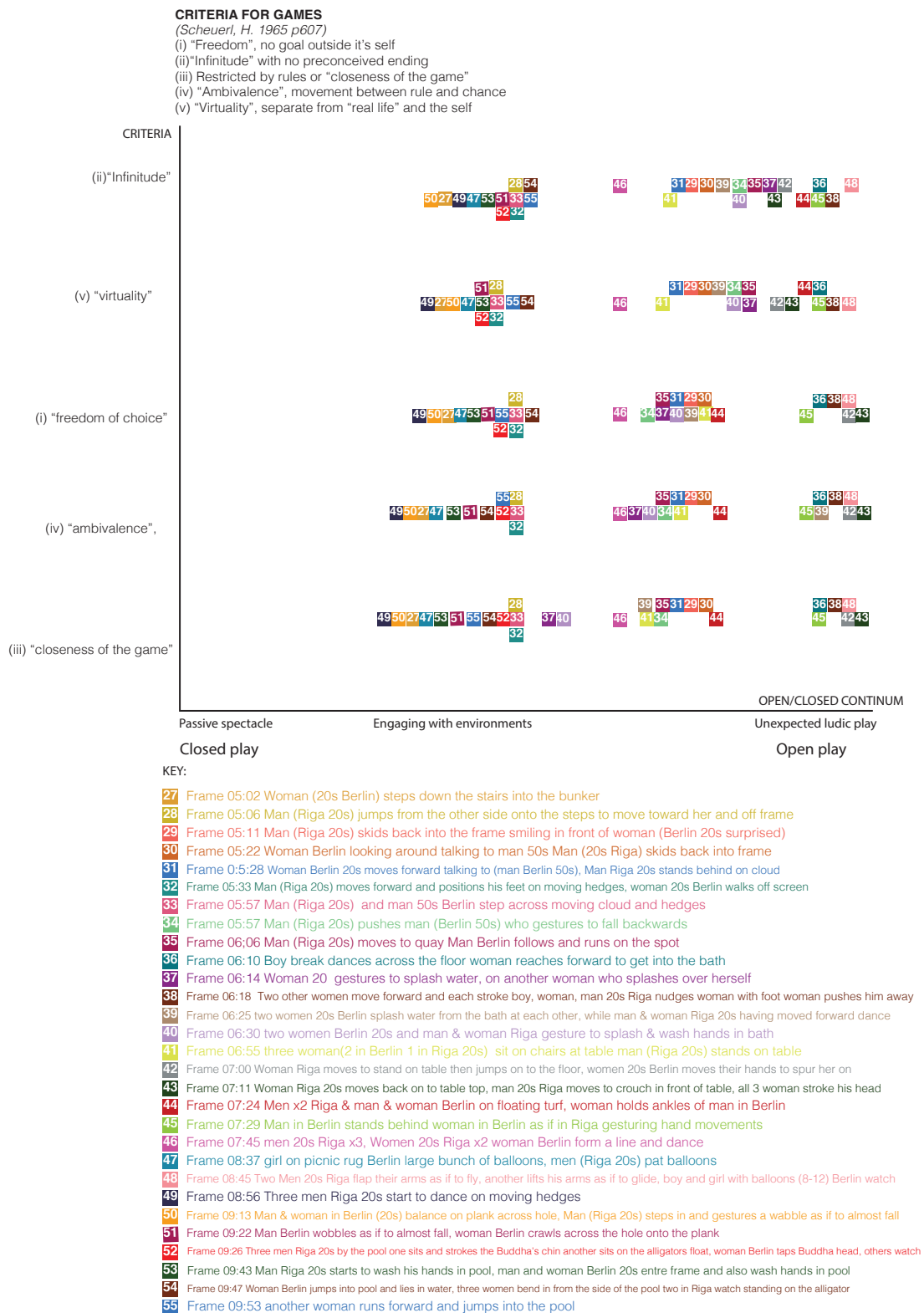


Figure 39 “Occupy the Screen” (b)

## “Occupy the Screen Open Closed Framework” (c)



Figure 40 “Occupy the Screen” (c)

## “Occupy the Screen Open Closed Framework” (d)

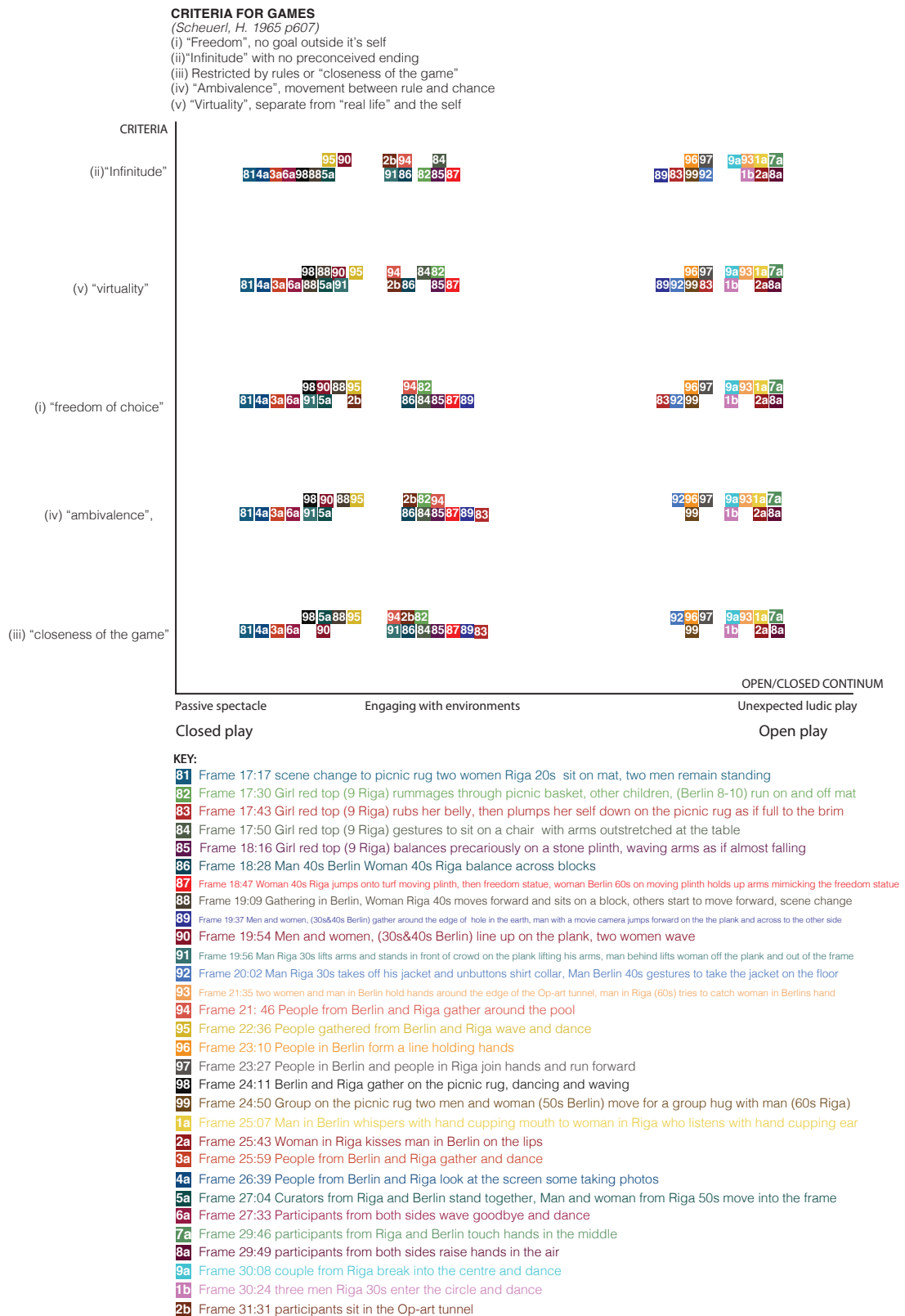


Figure 41 “Occupy the Screen” (d)

## “Screen test Open Closed Framework” (a)



Figure 42 “Screen test” (a)

## “Screen test Open Closed Framework” (b)

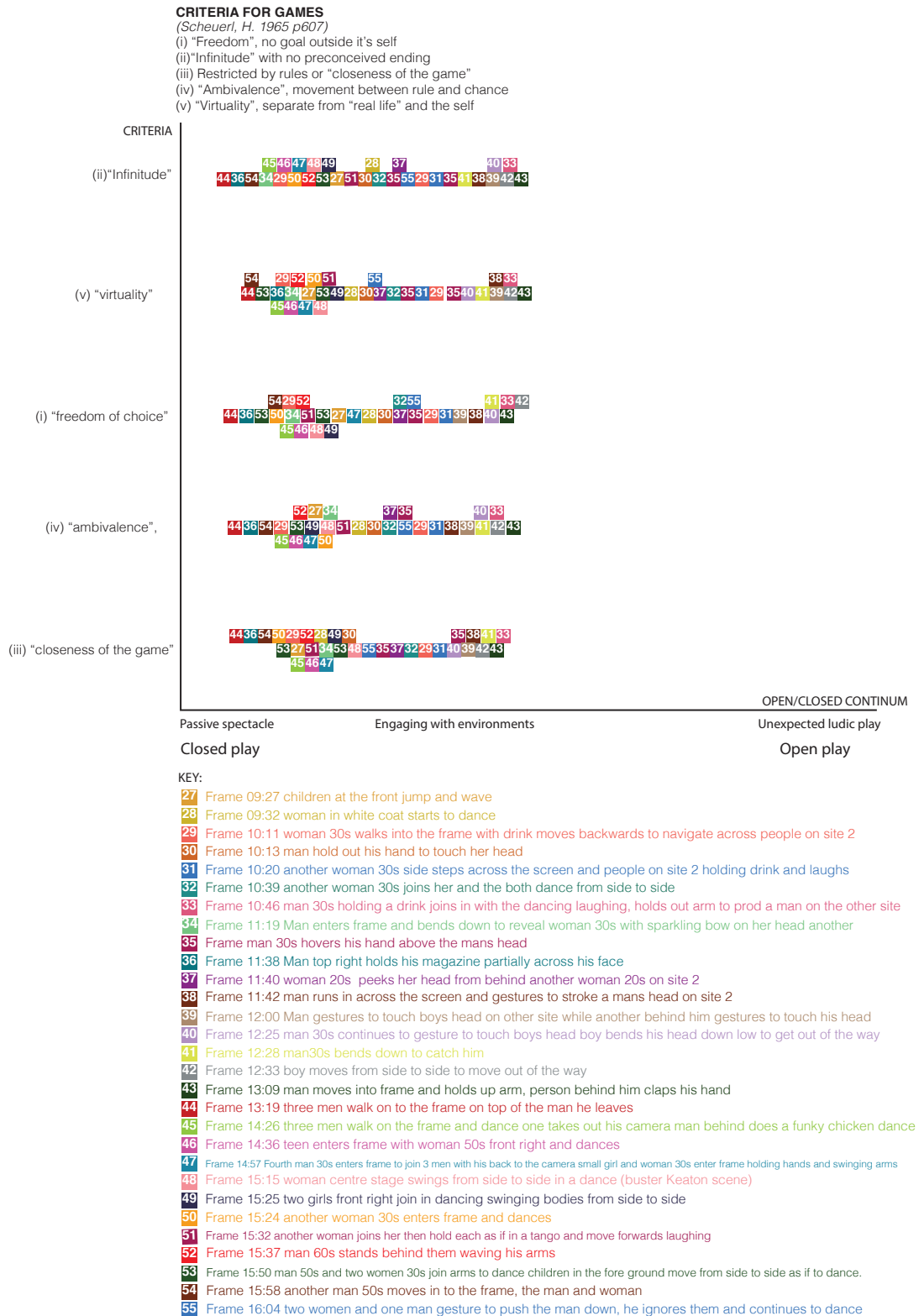


Figure 43 “Screen test” (b)

## “Screen test Open Closed Framework” (c)



Figure 44 “Screen test” (c)

## “Screen test Open Closed Framework” (d)



Figure 45 "Screen test" (d)

## 6.4 Media Art Open Closed Framework

## CRITERIA FOR GAMES

(Scheuerl, H. 1965 p607)

- (i) "Freedom", no goal outside it's self
- (ii) "Inerfinitude" with no preconceived ending
- (iii) Restricted by rules or "closeness of the game"
- (iv) "Ambivalence", movement between rule and chance
- (v) "Virtuality", separate from "real life" and the self



- 1 Ascott (1983) "La Plissure du Texte"
- 2 Cage, J. (1953) "4'33"
- 3 Crowe N. "Service 2000"
- 4 Fujihata M. (1995) "Beyond Pages"
- 5 Galloway K & Rabinowitz S. (1980) "Hole in Space"
- 6 Hemmer R.L. (2001-2003) "Body Movies: Relational Architecture"
- 7 Hoberman P. (1994) Bar Code Hotel
- 8 Kruger, M. (from 1969) "Video Place"
- 9 McCoy, J. & K. "How I Learned" (2002)
- 10 McCoy, J. & K. Soft Rains (2003)
- 11 Molner, V, (1980) "Machine Imaginaire"
- 12 Mignonneau, L. and Sommerer, C. "Interactive PLant Growing (1993)
- 13 New York Surveillance Camera Players (1996)
- 14 O'Shea C. (2009) "Hand from Above"
- 15 Paik N.J. (1963) "Exposition of Music-Electronic Television"
- 16 Paik N.J. 1984 "Good Morning Mr Orwell"
- 17 Rokeby D. (2001) "n-Chant"
- 18 Scott J. (1995) Frontiers of Utopia
- 19 Sermon P. (1992) Telematic Dreaming
- 20 Shaw Jeffery (1994) "Golden Calf"
- 21 Stelarc (1996) "Ping Pong Body"
- 22 Teran M. BUSCANDO AL SR. GOODBAR, 2009
- 23 Vostell, W. "Television De-collage" (1963)
- 24 Weibel, P. (1973) "Observation of Uncertainty"
- 25 X Adrain (1981) "World in 24 hours"
- 26 Oursler, Tony (1996) "Hello"
- 27 Viola, Bill (2000) "Quintet of Remembrance"
- 28 Lynn Herschmann Leeson 1970-98 "Cybe Roberta"
- 29 Fleischmann, Monika (1992) Home of the Brain
- 30 Jodi.org (1998)
- 32 Blast Thoery (2002) "Uncle Roy All Around You"
- 33 Rozzin, Dan (1999) Wooden Mirror
- 34 Deck, Andy (2001) "Glyphiti"
- 35 Scher, Julia (1989-90) "Security by Julia"
- 36 Hiller, Susan (2000) "Witness
- 37 Norman, Bruce (1970) Live Taped Video Corridor
- 38 Duchamp, Marcel (1920) Rotary Glass Plates
- 39 Moholy, Laszlo (1923-30) Light Space Modulator
- 40 Kepes, Gregory (1959) "Electric Light" Light Mural for KLM
- 41 SINA, Alejandro and Moira (1978) "Spinning Shaft"
- 42 Hasegawa, Akira (2005) "Digital Kakejiku"
- 43 Rhizome.org (1996)
- 44 Rist, Piolotti (1980) Open My Glade
- 45 Knowbotic Research (1994) "Dialogue with the Knowbotic South"
- 46 Simms, Karl (1997) "Galapagos"
- 47 Gordan Pask (1968) "The Colloquy of Mobiles"
- 48 Kaprow, Allan (1963) "Push and Pull. A Furniture Comedy..."

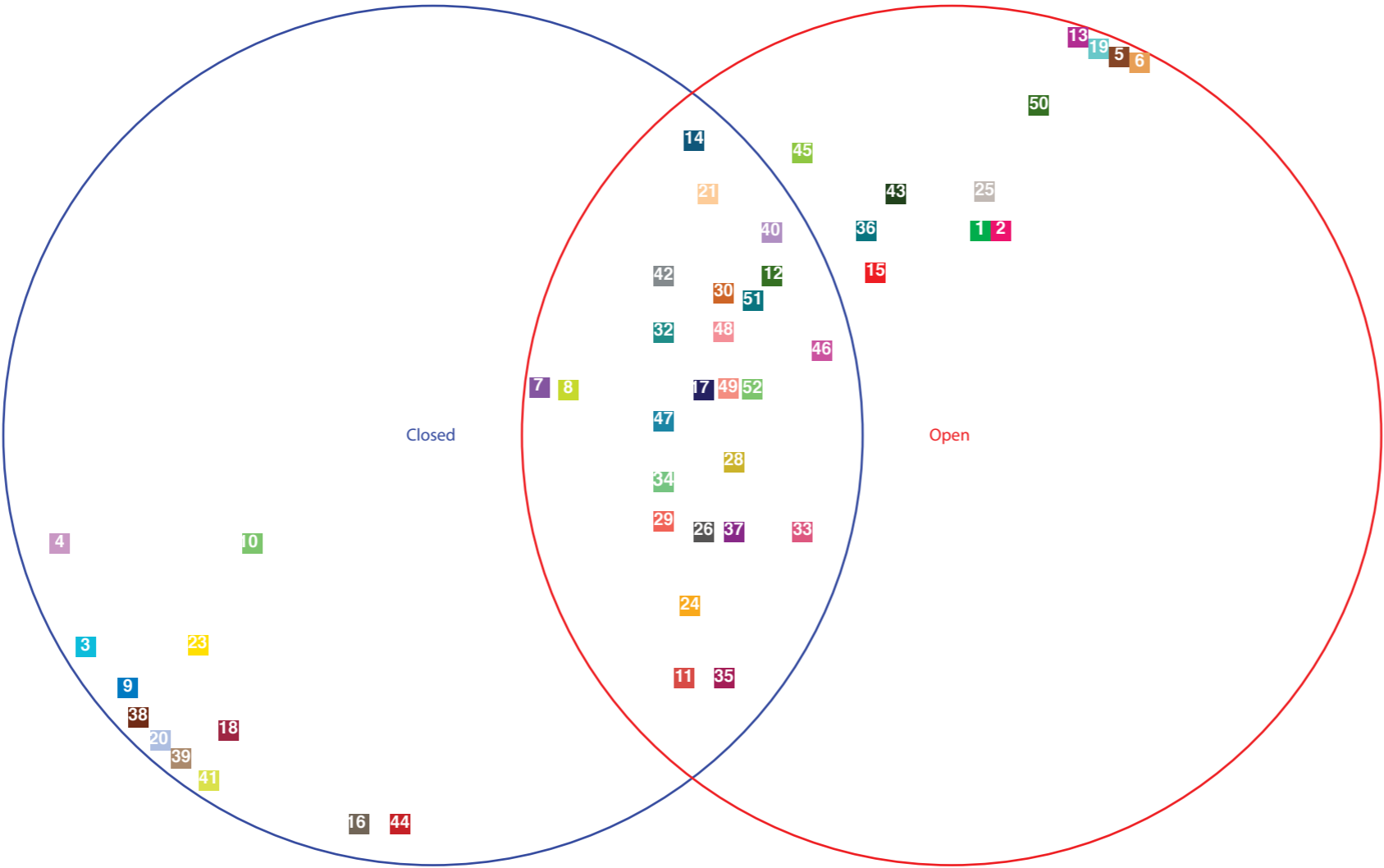
Figure 46 “Media Art Open Closed Framework”

6.5 Media Art Open Closed Venn Diagram

CRITERIA FOR GAMES

(Scheuerl, H. 1965 p607)

- (i) "Freedom", no goal outside it's self
- (ii)"Inerfinitude" with no preconceived ending
- (iii) Restricted by rules or "closeness of the game"
- (iv) "Ambivalence", movement between rule and chance
- (v) "Virtuality", separate from "real life" and the self



1 Ascott (1983) "La Plissure du Texte"

49 Bailey, J. "Master/ Slave Invigilator System"

32 Blast Thoery (2002) "Uncle Roy All Around You"

50 Blanco, C. and Mora, J. 2013 "Puppet Master"

2 Cage, J. (1953) "4'33"

3 Crowe N. "Service 2000"

34 Deck, Andy (2001) "Glyphiti"

38 Duchamp,Marcel (1920) Rotary Glass Plates

51 Alastair Eilsbeck 2011 "Me You and Us"

29 Fleischmann, Monika (1992) Home of the Brain

4 Fujihata M. (1995) "Beyond Pages"

5 Galloway K & Rabinowitz S. (1980) "Hole in Space"

47 Gordan Pask (1968) "The Colloquy of Mobiles"

42 Hasegawa, Akira (2005) "Digital Kakejiku"

6 Hemmer R.L. (2001-2003) "Body Movies: Relational Architecture"

36 Hiller, Susan (2000) "Witness"

7 Hoberman P. (1994) Bar Code Hotel

30 Jodi.org (1998)

48 Kaprow, Allan (1963) "Push and Pull. A Furniture Comedy..."

40 Kepes, Gregory (1959) "Electric Light" Light Mural for KLM

45 Knowbotic Research (1994) "Dialogue with the Knowbotic South"

8 Kruger, M. (from 1969) "Video Place"

28 Lynn Hershmann Leeson 1970-98 "Cybe Roberta"

9 McCoy, J. & K. "How I Learned" (2002)

10 McCoy, J. & K. Soft Rains (2003)

39 Moholy,Laszlo (1923-30) Light Space Modulator

11 Molner, V, (1980) "Machine Imaginaire"

12 Mignonneau, L. and Sommerer, C. (1993)

13 New York Surveillance Camera Players (1996)

37 Norman, Bruce (1970) Live Taped Video Corridor

52 Brendon Oliver "Star Catcher" 2009

26 Oursler, Tony (1996) "Hello"

14 O'Shea C. (2009) "Hand from Above"

15 Paik N.J. (1963) "Exposition of Music-Electronic Television"

16 Paik N.J. 1984 "Good Morning Mr Orwell"

43 Rhyzome.org (1996)

44 Rist, Piolotti (1980) Open My Glade

17 Rokeby D. (2001) "n-Chant"

33 Rozzin, Dan (1999) Wooden Mirror

35 Scher, Julia (1989-90) "Security by Julia"

18 Scott J. (1995) Frontiers of Utopia

19 Sermon P. (1992) Telematic Dreaming

20 Shaw Jeffery (1994) "Golden Calf"

46 Simms, Carl (1997) "Galapagos"

41 SINA, Alejandro and Moira (1978) "Spinning Shaft"

21 Stelarc (1996) "Ping Pong Body"

22 Teran M. (From 2009) Surveillance Camera Tours

27 Viola, Bill (2000) "Quintet of Remembrance"

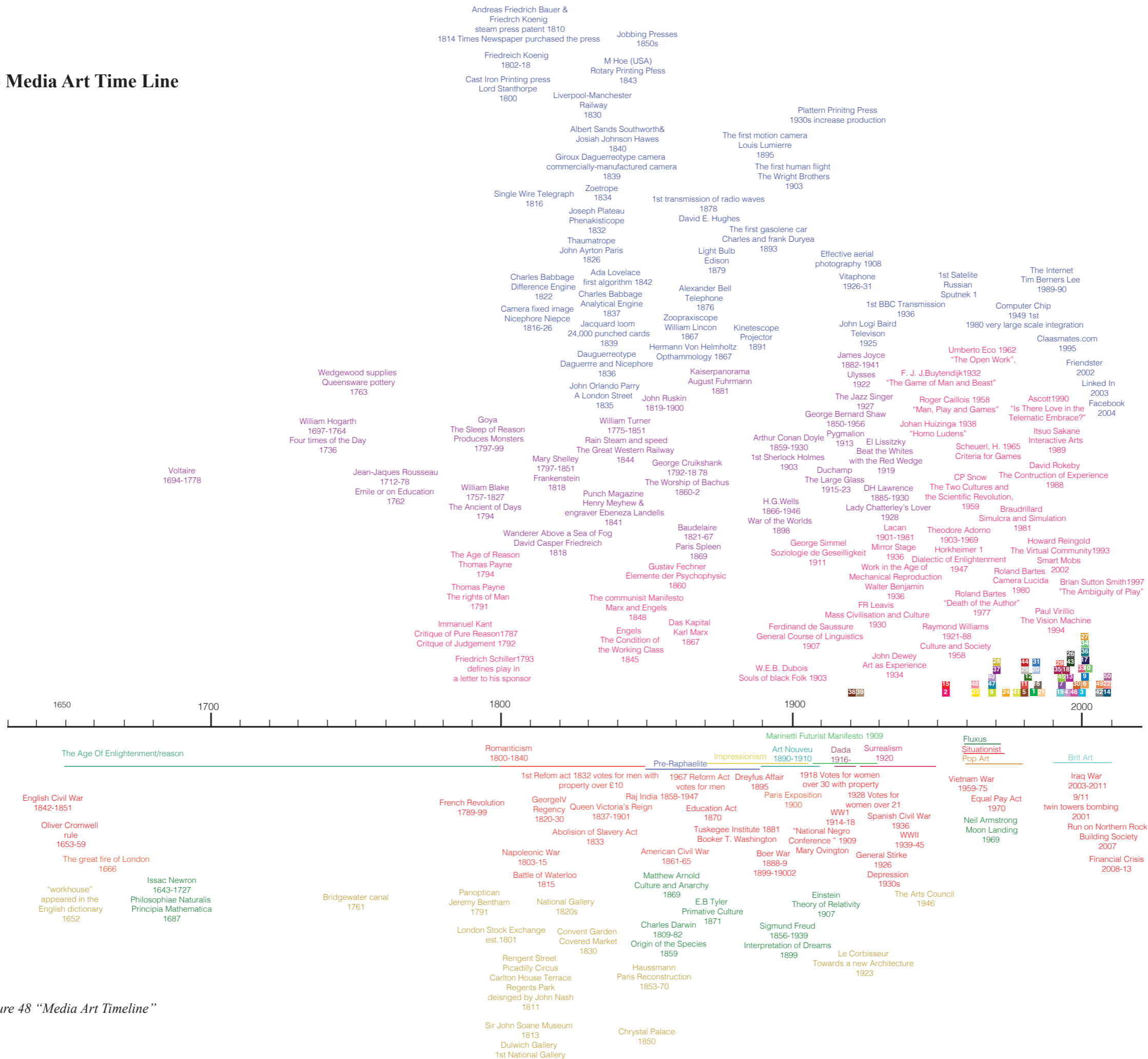
23 Vostell, W. "Television De-collage" (1963)

24 Weibel, P. (1973) "Observation of Uncertainty"

25 X Adrain (1981) "World in 24 hours"

Figure 47 "Media Art Open Closed Venn Diagram"

## 6.6 Media Art Time Line



- # KEY
- [1](#) Ascott, Roy (1983) "La Plissure du Texte"
  - [31](#) Anderson, Laurie (1984) "Mr Heartbreak"
  - [32](#) Blast Thoery (2002) "Uncle Roy All Around You"
  - [2](#) Cage, John (1953) "4'33"
  - [3](#) Crowe, Nick "Service 2000"
  - [34](#) Deck, Andy (2001) "Glyphiti"
  - [35](#) Duchamp, Marcel (1920) Rotary Glass Plates
  - [25](#) Fleischmann, Monika (1992) Home of the Brain
  - [4](#) Fujihata M. (1995) "Beyond Pages"
  - [5](#) Galloway K & Rabinowitz S. (1980) "Hole in Space"
  - [47](#) Gordon Pask (1968) "The Colloquy of Mobiles"
  - [46](#) Hasegawa, Akira (2005) "Digital Kakejiku"
  - [6](#) Hemmer R.L. (2001-2003) "Body Movies: Relational Architecture"
  - [36](#) Hiller, Susan (2000) "Witness"
  - [7](#) Hoberman P. (1994) Bar Code Hotel
  - [30](#) Jodi.org (1998)
  - [48](#) Kaprow, Allan (1962) "Words"
  - [49](#) Kepes, Gregory (1959) "Electric Light" Light Mural for KLM
  - [45](#) Knowbotic Research (1994) "Dialogue with the Knowbotic South"
  - [8](#) Kruger, M. (from 1969) "Video Place"
  - [28](#) Lynn Hershmann Leeson 1970-98 "Cybe Roberta"
  - [9](#) McCoy, J. & K. "How I Learned" (2002)
  - [10](#) McCoy, J. & K. Soft Rains (2003)
  - [33](#) Moholy, Laszlo (1923-30) Light Space Modulator
  - [11](#) Molner, V. (1980) "Machine Imaginaire"
  - [12](#) Mignonneau, L. and Sommerer, C. (1993)
  - [13](#) New York Surveillance Camera Players (1996)
  - [37](#) Norman, Bruce (1970) Live Taped Video Corridor
  - [23](#) Oursler, Tony (1996) "Hello"
  - [14](#) O'Shea C. (2009) "Hand from Above"
  - [15](#) Paik N.J. (1963) "Exposition of Music-Electronic Television"
  - [16](#) Paik N.J. 1984 "Good Morning Mr Orwell"
  - [43](#) Rhizome.org (1996)
  - [44](#) Rist, Piolotti (1980) Open My Glade
  - [17](#) Rokeby D. (2001) "n-Chant"
  - [33](#) Rozzin, Dan (1999) Wooden Mirror
  - [35](#) Scher, Julia (1989-90) "Security by Julia"
  - [18](#) Scott J. (1995) Frontiers of Utopia
  - [19](#) Sermon P. (1992) Telematic Dreaming
  - [38](#) Shaw Jeffery (1994) "Golden Calf"
  - [42](#) Simms, Carl (1997) "Galapagos"
  - [41](#) SINA, Alejandro and Moreira (1978) "Spinning Shaft"
  - [21](#) Stelarc (1996) "Ping Pong Body"
  - [22](#) Teran M. (From 2009) Surveillance Camera Tours
  - [27](#) Viola, Bill (2000) "Quintet of Remembrance"
  - [23](#) Vostell, W. "Television De-collage" (1963)
  - [24](#) Weibel, P. (1973) "Observation of Uncertainty"
  - [25](#) X Adrain (1981) "World in 24 hours"
  - [49](#) Ji Lee (2005) "Abstractor-New York"
  - [50](#) Nickola-Lenisvet (2009) "Airport"

Figure 48 “Media Art Timeline”

## 6.7 Urban Screens Project Timeline

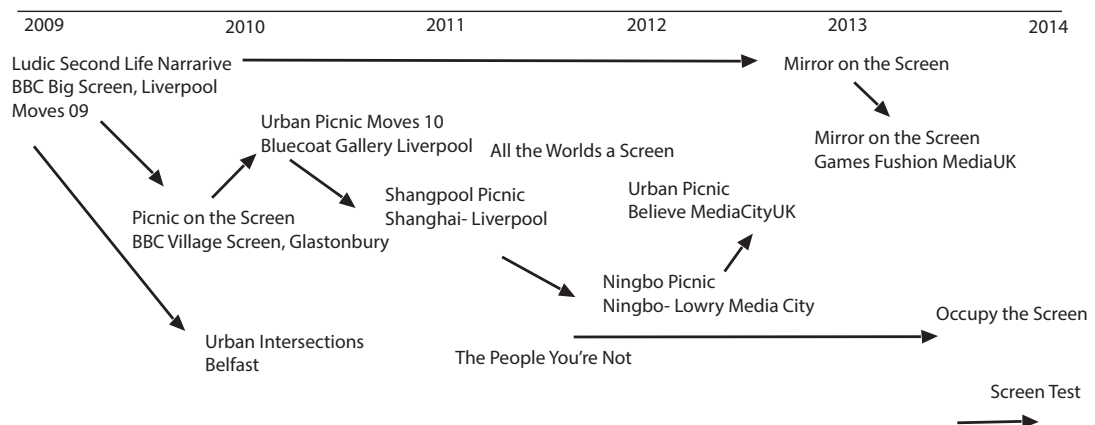


Figure 49 timeline

## 6.8 List of Installations

Gould, C. Sermon P. 2014, "Screen Test" Staro Riga Capital of Culture, 14-18<sup>th</sup> November 2014

Gould, C. Sermon P. 2014, "Occupy the Screen" Connecting Cities Festival, EU Capital of Culture, Riga 2014 and Supermarkt, Berlin from 11-13<sup>th</sup> September 2014

Gould, C. Sermon P 2012, 'Experimental Application Workshop and Exhibition', exhibited at: College of Fine Arts Shanghai University, Shanghai, China, from 04/11/2012 to 17/11/2012.

Gould, C. Sermon P 2012, 'Mirror on the Screen', exhibited at: Nottingham Playhouse, Nottingham, UK, from 05/09/2012 to 30/10/2012.

Gould, C. O'Callaghan, B. Gibson, H 2011, The People You're Not, (Exhibition), Cornerhouse, Manchester, United Kingdom.

Gould, C. Sermon P 2011, 'Picnic on the Screen for Believe, Digital Performance Lab', exhibited at: The University of Salford Media City, Salford, UK, from 11/11/2011 to 12/11/2011.

Gould, C. Sermon P. 2011, 'Urban Picnic on the Screen', exhibited at: University of Nottingham for Digital Resources in the Humanities and Arts 2011, Ningbo, China, from 04/09/2011 to 07/09/2011.

Gould, C. Sermon P. 2011, 'All the world's a screen', exhibited at: Hangar.org Barcelona and MadLab Manchester, Barcelona and Manchester, Spain and UK, from 28/05/2011 to 28/05/2011.

Gould, C. Sermon P. 2011, 'The seven stages of man', exhibited at: MACBA Study Centre and the Umbro Design Centre for the FutureEverything Festival 2011, Barcelona and Manchester, Spain and UK, from 13/05/2011 to 13/05/2011.

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