Elena Pérez

THE IMPACT OF DIGITAL MEDIA ON CONTEMPORARY PERFORMANCE

How Digital Media Challenge Theatrical Conventions in Multimedia Theatre, Telematic and Pervasive Performance

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Abstract

This thesis investigates artworks born at the convergence of *digital media* and *contemporary performance*, and the ways in which technology impacts the field of performance. The term digital media refers to technology that produces digitised (as opposed to analogue) content such as text, audio, video, graphics and metadata. Contemporary performance refers to artworks that combine different artistic traditions—experimental theatre and dance, video art, visual art, music composition and performance art—in a single performance event. The convergence of these two fields has produced a significant body of technological works of art that challenge and reconfigure traditional conventions in contemporary performance. This thesis examines the impact of digital media on the ways performance is created, received and experienced, and the extent to which media open up new possibilities for creative expression and may generate new art forms.

I mapped the field by defining three large categories that mark the heterogeneous landscape of technologically enhanced performances today, namely *multimedia theatre*, *telematic performance* and *pervasive performance*. Methodologically, I combined hermeneutic methods of interpretation and reflection with academic forms of practical inquiry, combining textual analysis of relevant works from each of the three categories—such as *Ghost Road* (Murgia and Pauwels 2012), *make-shift* (Jamieson and Crutchlow 2010) and *Rider Spoke* (Blast Theory 2007)—with the practical development and analysis of a pervasive performance experiment titled *Chain Reaction* (Pérez 2009 and 2011). Theoretically, the project is interdisciplinary, bringing together performance theory, digital media studies, experimental game scholarship and experiential art documentation.

In discussing the ways in which digital media impact contemporary performance, I identify a number of traditional conventions in the field of theatre and performance that are currently being challenged. These are in the areas of audience participation, use of space, actor role, rehearsal and staging, and performance documentation. Central arguments in the thesis are, on the one hand, that researchers, critics and practitioners must look beyond the visionary expressions of aesthetic potential in order to grasp the real state of technologically enhanced art forms. On the

on the other hand, it is only by considering both, the horizon-pushing high-tech along with the purpose-orientated low-tech, that a more grounded understanding of the present impact of developing technology on art culture can and should be reached.

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PART I: Theory and Practice

Chapter 1: Introduction

In 2000, and as part of my bachelor studies in English philology, I saw Robert Lepage's *The Far Side of the Moon*. The play was very different from all of the other pieces taking place in the theatre scene in Madrid at the time. It was not only radically contemporary—about people like me, with problems like my own—but, most strikingly, the play used a visual vocabulary onstage that appealed to me in a very straightforward sense. It felt as if the *mise-en-scène* was tailor made for my generation.

The reviews that appeared in newspapers over the following days were very divided: some were fascinated by the performance and the use of technology, while others were sceptical of the use of special effects and wizardry that, for them, took away the magic that theatre is supposed to deal with. For some, Lepage was a visionary, while for others, he was a formalist, or, as he has ironically referred to himself on some occasions, 'an aesthete without substance' (Delgado and Heritage 1996, 158). It was in this moment that I found the seed that would, years later, initiate this PhD project. When is the use of technology satisfactory in theatre and when is it not? Why? These questions, which I posed at that time, have now become central to my thinking.

This thesis concerns the study of artworks born at the convergence of digital media and contemporary art, and the ways in which technology impacts the art fields. It focuses on contemporary performance; however, since digital media impact all art forms—forcing them to ask the same questions—this study may be useful to all of the art fields, as they tackle similar issues.

The term *digital media* refers in this thesis to digitised (as opposed to analogue) content such as text, audio, video, graphics and metadata that can be stored and transmitted over the Internet and computer networks. I use the term *contemporary performance* to refer to works that are characterised by their juxtaposition of different artistic traditions—such as experimental theatre and dance, video art, visual art, music composition and performance art—in a single performance event, and that also engage with social and political realities.

The convergence of these two fields has produced a significant body of technological artworks that proliferates as rapidly as new technologies appear, but may disappear equally as quickly, as these very technologies may rapidly become obsolete. The artworks created in this convergence may, on the one hand, vitalise performance by adapting it to current times, while, on the other hand, challenge the field by forcing its professionals to re-think what constitutes theatre and performance. The term *digital performance* is used to describe a broad variety of works in which digital media are used 'to supplement physical actors in theatre, dance and performance art, as well as the staging of theatre and performance art productions in cyberspace and online worlds, where the physical actors are replaced by virtual representations. It may also include interactive installations and performances in which the actors are non-human, for example, robots and chatterbots' (Tronstad 2014a, 388).

The convergence of performance and technology is not a new phenomenon. There has always been an important link between scientific discoveries, technical developments and their use and application within the theatre (and the arts, in general). However, several historical milestones have been especially significant to the development of the field. The invention of gas lighting in the early 1790s, for instance, had the significant impact of over half a century of experimentation with dimming, blending and colouring light on the nineteenth century stage (Bauch 2005).

In relation to our current times, the advent of digital media in the 1990s and other more recent developments—such as the rise of ubiquitous media, location-based media and social media—may arguably have constituted other significant moments in which technology came to impact most areas of human activity. As digital media now pervade every aspect of human life, such as writing, communicating, playing and more, engagement with digital media is becoming a recognised social practice and therefore a part of modern culture (Hesmondhalgh 2007; Puig 2008).

In the humanities, multiple voices debate the impact of digital media on society. It is easy for these voices to fall into polarised positions, adopting a technophilic or technophobic approach that either celebrates the joys of technology or demonises it and its negative consequences. Within this debate, it is important for scholars to develop less radical positions and aim for more balanced reflections, presenting technologies' variances and bringing forward a discourse that shows the different implications of technology.

An example of a current debate related to this project is whether digital media can foster more democratic cultures and societies as a result of the interactive, participatory nature of the computer aesthetic (Jenkins 2006; Bruns 2008; Lessig 2008; Gladwell 2010; Anderson 2012; Jun 2013). Another debate revolves around the question of how technological devices impact modes of communication: whether they bring people together or, in fact, stand in the way and keep people apart (Castells 2010; Castells et al. 2007; Turkle 1995; Turkle 2011). Another debate that is central to this thesis revolves around the aesthetic implications of the application of digital media to artworks, and the extent to which media may offer possibilities for new theatrical expressions (Hilton 1993; Giannachi 2004; Auslander 1999; Berghaus 2005; Ine Therese 2005; Lehmann 2006; Causey 2006; Dixon 2007; Balme 2010; 2014; Klich and Scheer 2012).

In this thesis, I aim to present a nuanced critical reflection on the different repercussions of applying digital media to performance works. The thesis is also, to a great extent, practice-based. As part of my investigation, I created a performance piece titled *Chain Reaction* (2009 and 2011), which is included here as an important case study, and which played a fundamental role in my reflections and conclusions.

This is an article-based thesis, divided into two main parts. Part I includes an introduction to the object of study, presents the state of the art and describes the practical project of *Chain Reaction* in detail and in its historical context. It then explains the theoretical and methodological framework used in the thesis. It also contains a cross-examination of the main discussions and findings of the articles, through which I attempt to systematise the impact of digital media on performance and discuss the extent to which this impact affords new direction for creative expression. It closes with a conclusion, which reflects on the implications of this research project for the field of performance studies and points to topics for further research.

Part II includes six articles, four of which have been published and two that have been accepted for publication. Article 1, 'Academic Research and Artistic Practice in *Chain Reaction*: Methodology on Two Levels' has been published in *InFormation: Nordic Journal of Art and Research* (Vol. 3, No. 1, 69–82, June 2014). Article 2, 'Fostering Participation Through Ubiquitous Media in Pervasive Performance' has been accepted for publication in *Ubiquity: The Journal of Pervasive* (Vol. 3, No. 1, 2015). Article 3, 'Experiential Documentation in Pervasive Performance: The Democratisation of the Archive' has been published in the *International Journal of Performance Arts and Digital Media* (Vol. 10, No. 1, 77–99, June 2014). Article 4, 'Performance Meets Games: Considering Interaction Design Strategies in Game Design' has been published in *Digital Creativity* (Vol. 24, No. 2, 157–64, September 2013). Article 5, 'Meaningful Connections: Exploring the Uses of Telematic Technology in Contemporary Performance' has been published in *Liminalities: A Journal of Performance Studies* (Vol. 10, No. 2, May 2014). Article 6, 'The Expansion of Theatrical Space and the Role of the Audience' has been accepted for publication in *Nordic Theatre Studies* (No. 26, 2015).

1.1 State of the Art

The convergence of digital media with contemporary performance has resulted in new cross-disciplinary art forms. Such art forms challenge the field of performance in multiple ways, as they blend the aesthetic nature of technology with traditional performance forms. Theatre scholar Julian Hilton (1993) speculated on whether the increasing presence of multimedia and the kinds of parallel processing it requires would set a new model for performance. Following this line of thought, performance theorist Philip Auslander (1999) argued that the shift towards the visual vocabulary of screens and projections in theatre and performance is a result of media's dominant status in contemporary culture. Technology is viewed here in a positive light—with the capacity to produce meaning—and not simply as a mere tool.

Theatre historian Christopher Bauch (2005) argued that 'technologies may have meanings in and of themselves, and are not simple servants to the mechanistic needs of theatrical representation. They are an expression of a relationship with the world and reflect complex values and beliefs' (8). This idea was introduced by the modernists in the early European avant-garde, who allowed technology to invade the stage as part of theatrical aesthetics. This was part of the re-theatricalisation effort in

Western theatre from the 1920s that aimed at making theatre able to constitute a reality of its own, rather than imitating or representing a reality that existed in other places. Vsevolod Meyerhold, for example, used the means of *agit-prop* theatre, scenic constructivism and circus-style effects to acquaint his audiences with technological advances. Adolphe Appia developed three-dimensional 'living' sets thanks to his experimentation with lighting and stage design, and Edward Gordon Craig was the first practitioner to use neutral, mobile, non-representational screens as a staging device (Roose-Evans 1989; Bauch 2005).

It is hard to determine the extent to which the theatrical innovators of the early twentieth century appropriated developing technologies in their efforts to create new 'languages' of theatre, pushing its boundaries and challenging theatre's conventions, or if it was the new technologies' characteristics and what they allowed practitioners to achieve that pushed the boundaries of theatre forms. The difficulty of answering this question, still today, lies in the fact that, in these creative processes, we find many actors contributing—many agents participating and many interests and ambitions coming together, in addition to the technological context in which these processes occur; this makes it difficult to pinpoint the original impulse that ultimately pushes new theatre forms.

This question is part of a larger debate in art, science and technology that examines the different factors that lead to innovations in this particular convergence. The interaction between artistic practices and technological development is reciprocal and deeply intricate. It brings together two different cultures, with two different epistemological systems, modes of production and criteria for quality and results (Daniels and Schmidt 2008). In some cases, the artists and their need for creative expression might lead to technological innovation; in other cases, experimentation with existing technologies may be sufficient to lead to new aesthetic forms.[1] As it might be too complex to identify the origin of an innovation, we might perhaps aim at making explicit the different factors that are relevant to a particular innovation in a specific context.

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[1] Daniels and Schmidt explained how, in the early twentieth century, some 'artists turned into inventors for practical reasons. To respond with their aesthetic visions to the impact of technology on the human senses, they needed a new apparatus that was not yet available' (2008, 9).

An important critique of the optimistic stand on technology comes from the critique of the theory of *technological determinism*, which was derived as a consequence of Veblen's theory of institutional change (Brette 2003). Technological determinism is based on the proposition that technology has a powerful influence on human society, so much so that it can not only bring about social change, but can also control the long-term socioeconomic behaviours and beliefs of human beings (Moore 1965). When applied to art, it means that technology's characteristics and administrative and managerial logic pervade the logic and structures of art processes. In other words, technology determines what can (and cannot) be done, steering in certain artistic directions and therefore restricting artists from going in other directions. While technology affords certain processes, it also sets frames that determine what we see, what we do and how we do it. The question then becomes: To what extent is the artist/creator able to use technology at will to achieve her purposes, and to what extent does technology determine what can be done? As we will see, answering this question is a complicated task, and I will address it in various places throughout this thesis.

The application of technology to performance has always generated a certain scepticism—a criticism that questions if this application is beneficial to the performance aesthetic or if, on the contrary, it is detrimental (Bauch 2005; Giesekam 2007).[2] Even though the vast number of public theatres has always been technologically complex (using established theatrical technologies such as lighting, sound and set design), some brackets in the field have argued against technological use. Theatre and film scholar Greg Giesekam (2007) explained how the reaction against employing film or video (or any other technology, for that matter) in theatre 'has been partly shaped by the long running tension between a stripped-down theatre and one that enjoys the visually spectacular' (5). We acknowledge these two paradigmatic attitudes, epitomised by Jerzy Grotowsky's *poor theatre*, advocating the elimination of the superfluous—including make-up, costumes and scenography—and

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[2] British theatre critic Lyn Gardner, for the newspaper *The Guardian*, has written several opinion articles that aim at tackling this question: 'Should Theatre Leave More to the Imagination?' (2012), 'Does Digital Technology Help Theatre, or Hinder it?' (2013), And 'Why Digital Theatre Poses no Threat to Live Performance' (2014).

Vsevolod Meyerhold's embrace of theatrical design in its broadest sense—through settings, architecture, colours and costumes.

Today, the general criticism against performance pieces at the convergence with digital media can be synthesised into the argument that the resulting works are not always convincing on a conceptual and artistic level, as they are either technically underdeveloped or overdeveloped, and seek to merely impress audiences with spectacular technological display (Berghaus 2005).

While the problems with underdeveloped works are fairly easy to identify—for example, poor image resolution, poor execution or technical failure altogether (either unexpected technological failure or technology that simply does not work)—the problems with overdeveloped works are harder to pinpoint. First, what does it mean that a performance is technically overdeveloped? On the one hand, it could refer to the mere use of high-technology (high-tech), while, on the other hand, it could refer to the overuse of technology, regardless of whether it is high-technology or low-technology (low-tech). Why exactly do such performances not fulfil the standard criteria for quality in the arts, according to the critics?

Berghaus claimed that the problem is that performances seek to fascinate audiences with 'technological wizardry' (2005, 235). He continued to explain that, in his experience, 'once the novelty value had worn off, little stayed in one's memory except for some clever visual effects and at most some haunting images and metaphors of the human machine forming part of a large cybernetic environment' (235). In this view, the problem has to do with fascination, wizardry and novelty. This critique resonates with a tendency in the field of art and technology to rely on what I propose to call the *Shock and Awe* aesthetic, which I hereby define as: seeking to impress and overwhelm audiences with a theatrical technological display that enhances technology's innovative attributes. Shock and Awe performances are built around constructing the dramaturgy of the technology's spectacular display and its unfolding to the audience, rather than integrating the technology in a larger dramaturgy.

The term Shock and Awe comes from a strategy utilised by the United States in the Iraq War, whereby force was displayed in a spectacular manner to achieve rapid dominance. The stated aim of the Shock and Awe concept is: 'to impose this overwhelming level of Shock and Awe against an adversary on an immediate or sufficiently timely basis to paralyze its will to carry on… [to] seize control of the

environment and paralyze or so overload an adversary's perceptions and understanding of events that the enemy would be incapable of resistance at the tactical and strategic levels' (Ullman and Wade 1996, xxv).

In this view, spectacular displays of force may have the effect of making the viewer surrender immediately, even if the actual force *is not as large as what is displayed*. It is assumed that one can achieve major results only by making a spectacular display of something that is not, in reality, present.

Applying the Shock and Awe concept to digital performance works, I draw the following analogy: in the same way in which the Shock and Awe doctrine seeks to paralyse the enemy so that he surrenders before battle has even started, the Shock and Awe aesthetic seeks to mesmerise the spectator so that she surrenders, so to say, to the technology being demonstrated, and refrains from a further search for meaning beyond the technology, itself. In this way, the spectator accepts and understands the mechanisms of the technology as the focus of the work, and does not search for meaning outside of it (i.e., in other parts of the performance piece). The dramaturgy of the technology substitutes the dramaturgy of the performance.

The Shock and Awe aesthetic is often used in high-tech performances, because it has cutting edge technology to display: technology that has not been seen before or is rare. However, it can also be used by low-tech performances that aim at creating an illusion of being high-tech. A Shock and Awe aesthetic can obtain prestige and create technological mesmerisation and ecstasy in the audience, together with fulfilment of technological curiosity and a feeling of participation in the collective imagination of technological futures. For this reason, when a performance is advertised as incorporating the latest technological advances, it tends to attract new audiences that are mostly interested in the technology.[3]

The drawback of a Shock and Awe aesthetic is that, no matter how innovative and shocking the technology, the sense of shock is ephemeral and rapidly fades away. Its effects last for as long as the technology displays new features, and when the technology runs out of new actions, the shock and awe disappears. It is at this point that the performance often becomes boring and repetitive, revealing that the technological demonstration is not enough to engage the audience. This is because

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[3] A fellow spectator of Stelarc's performance *Muscle Machine* (2003), which I attended, noted how he bought the ticket only to see the robotic structure displayed in front of him *live*, rather than on TV or in a video on the Internet. This is an example of a spectator attracted to a performance event only because of the technology.

what we really have are technological demonstrations *framed* as performance; therefore, performance becomes its *primary frame,* a term sociologist Erving Goffman used to identify the context that fundamentally defines what is going on in a situation (Goffman 1974). As performance conventions are not fulfilled, the technological demonstration becomes explicitly incomplete.

Another issue with the Shock and Awe aesthetic is that the language used to advertise these types of performances is often very celebratory, creating high expectations that are rarely met. For example, it is often claimed that performances using three-dimensional (3D) technology *immerse* the spectator in new ways, revolutionising what it means to be a spectator and breaking the fourth wall; in reality, the spectator remains sitting, and nothing really changes, except for the introduction of 3D glasses. In this sense, there is a gap between what the performance aspires to deliver and what is achieved in practice, which ultimately works to the detriment of the performance.[4]

As all digital performances could potentially be accused of using the Shock and Awe aesthetic to a larger or lesser extent, this risk could largely explain critics' scepticism. Amongst practitioners and theorists from the art world, a related critical view concerns how some performances 'demonstrate(s) complex and fascinating software research undertaken to present new technological paradigms for performance, rather than creating an intellectually or dramatically fulfilling piece of theatre' (Dixon 2007, 392). This critical standpoint to technology is important because it forces us to reflect on the aesthetic potential of technology when applied to performance. Ironically, however, it may be this very scepticism towards technology in art that prevents critics from recognising the potential for productive changes in the theatre field that the use of new technology represents. The Shock and Awe aesthetic is predictably pushed forward as a critical alibi to avoid acknowledgement of how technology may also represent a productive challenge to the traditional conventions of theatre and performance. As I intend to demonstrate in this thesis, technology is an external element that, when converged with performance, not only brings to the surface existing conventions in performance (making us more aware of them), but also potentially impacts upon them, changing these conventions significantly in different ways.

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[4] See Dixon's discussion of the performance *Machinal* (2007, 386–9).

It is not my intention to argue that the application of low-tech is always artistically acceptable, or that the application of high-tech necessarily produces a Shock and Awe aesthetic: this would be an oversimplification of the issue I am presenting here. Some high-tech digital performances, such as *Continuous City* (The Builders Association 2007), integrate technology and make successful works that are generally applauded by the critics; other performances, such as *Verion: We Need More Data* (Kahn et al. 2009), do not do this. In the same way, some low-tech performances, such as *Your Brother, Remember?* (Oberzan 2010), manage to create interesting performances, while others, such as *The Nose* (Liptsin 2010a), do not. In other words, there is no ontological determinism in high-tech or low-tech that makes one of them more apt for use in performance. It is not about high-tech being less apt for performance than low-tech, but about *how* high-tech and/or low-tech are used. This is also supported by the fact that it is becoming increasingly difficult to differentiate between a high-tech and a low-tech performance, due to how performances attempt to 'pass as the other' and also because of the confusion that arises due to rapid shifts in technological development.

In an attempt to open up the polarisation of high-tech and low-tech, Philip Auslander (2005) proposed an examination of the working context of those engaged in the production of these works, rather than an analysis of the technologies, themselves. In his view, the problems that arise when practitioners need to collaborate with engineers in order to ensure funding (and competency with the technologies in use) ultimately reflect on the productions. He argued that this collaboration may come at a very high price for the artist, with issues that need to be negotiated such as satisfying different agendas, using technologists' vocabulary and using different criteria for quality, to mention a few.

Even though Auslander's contribution helps us start to think about this polarisation in new ways, it ends, again, by forming a new polarisation. High-tech is unsatisfactory because the context of those working on a high-tech performance is marked by collaboration with professionals outside of the theatre community—and all of the complications this brings—while low-tech performance is adequate because the working context stays within the theatre community of the artists.

However, it is important to acknowledge that the theatre community of artists is, itself, already multidisciplinary, as it is formed by different skilled professionals—actors, directors, dramaturges, stage designers, light technicians, etc.—who need to

collaborate and bridge different disciplinary cultures existing within the community. It would be interesting, and certainly helpful, to specifically study the production context of high-tech, in relation to low-tech, performances; however, I was not able to accomplish this within the scope of this thesis. More knowledge about the negotiation dynamics that surround these collaborations would have been useful for this study. But, for now, highlighting the importance of the collaborative process in the different production environments is already productive by focusing on how the successful use of technology in performance may be determined by the political, economic and aesthetic tensions created by the context in which the performances are produced.

1.2 Three Categories

This observation led me to consider both high-tech and low-tech performances as case studies in this thesis. I selected, as case studies, digital performances in which digital media supported a live performance. In an attempt to map the heterogeneity of the field of technological arts today, I identified three main trends—multimedia theatre, telematic performance and pervasive performance—which comprise contemporary practices at this convergence: three large categories that represent both established practices with a long history and more recent emergent practices that are still widespread enough to be considered more than occasional experiments.

I chose to create these categories based on the technology that they utilise and not on other criteria, such as, for example, the relational qualities they might induce between people, spaces, places and time. Telematic and pervasive performance share fundamental relational qualities; for example, their incorporation of remote locations. Thus, if I were to have categorised them according to their relational qualities, telematic and pervasive performance would have perhaps merged into a single category, even though other qualities separate them. Most importantly, however, organising them according to the technology they utilise allowed me think of them separately in an initial stage, and later, through the course of the investigation, flesh out their other qualities for further comparison and analysis.

1.2.1 Multimedia Theatre[5]

The concept of *multimedia theatre* generally 'refers to any performance that employs film, video or computer-generated imagery alongside live performance' (Giesekam 2007, 8). In this study, multimedia theatre also refers to performances with a traditional relationship between the performer and the audience, wherein the audience watches a staged performance without actively taking part in it as performers.

The technology used is either a video camera that transmits images to onstage screens or computers that project data (from still to moving images, data visualisation, etc.; anything that can be done on a computer can be projected) onto a variety of onstage surfaces.

Today, multimedia theatre is an established genre: we find multimedia works across all levels of the theatre spectrum, from established venues to more alternative spaces and marginal circles. It has—so to say—become part of mainstream practice. On the one hand, we have works by established practitioners such as Canadian Robert Lepage and American Robert Wilson, works by alternative companies such as New York–based Radiohole, German Rimini Protokoll and European directors such as Catalán Roger Bernat, German Sebastian Hartmann and young Belgian Fabrice Murgia.

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[5] The Theatre and Intermediality Working Group (Chapple and Kattenbelt 2006) proposed the term *Intermediality* to convey meaning creation in theatre and performance, which happens 'in-between the performers, the observers, and the confluence of media involved in a performance in a particular time'(12). Greg Giesekam (2007) also proposed the term *Intermedia(l) Theatre* to refer to the combination of media such that 'neither the live material nor the recorded material would make much sense without the other' (8); this is contrasted with *Multimedia Theatre*, in which media merely support stage action. I have, however, decided to use the term *Multimedia Theatre* in this thesis because, despite these efforts to introduce new terms, *Multimedia Theatre* is still most used by practitioners and critics in theatre and performance environments. Even though I acknowledge that it is often associated with art forms from the 1980s and seems to focus on simultaneous dramaturgies, I believe that the term is being transformed and is able to incorporate the sense of 'in-betweeness that intermedial theatre' revolves around.

Figure 1: Close-up of a woman is projected onstage while a stage actor performs a song during the musical performance *Ghost Road* (2012) by Fabrice Murgia and Dominique Pauwels. Photography: Kurt van der Elst.

Multimedia theatre has a long history of its own. Some scholars trace its origin to the early twentieth century *theatre of images* that prioritised images over dramatic form, relying on the idea of visual composition as a creative principle inspired by Cage's idea of composition; this can be noted in the work of Robert Wilson and Lee Breurer (Klich and Scheer 2012, 40). Other scholars trace its origin to the 1980s, when a group of artists rebelled against *performance art* (which was the dominant genre at the time) and approached theatre in search of elaborate visual, auditive, temporal and spatial structures (Berghaus 2005). Practitioners engaged with this tradition include Robert Lepage and The Builders Association.

These two ways of using images in theatre correspond to different artistic traditions. The former prioritises image over plot and characters, as is often done in *post dramatic* theatre (Lehmann 2006); here, the focus is on simultaneous dramaturgy, appealing to the unconscious by generating gestures, scenes and emotions rather than communicating a clear and fixed message. The latter incorporates media in accordance with conventional dramatic forms, wherein a message is conveyed and communicated to an audience in an Aristotelian fashion.

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1.2.2 Telematic Performance

Telematic (or networked) performance uses telecommunication technology to establish links between remote spaces. It locates performers in each remote space and then presents the activities in these two separate spaces variously at a single performative event, often using the Web as a third performative space. The interaction between the remote spaces, the combination of physical space with virtual space and the interaction between the *participants* located in these spaces are central qualities of this category.

There are typically two versions of telematic performance. One is high-tech; it uses teleconferencing to connect full body performers in two or three dimensions, has high resolution and is expensive and cumbersome—so technically complex that it needs to be mounted in a fixed location. The other applies low-tech, domestic technologies such as Skype, has low resolution and is cheap and pervasive—technically so simple that that it can be used anywhere (Geelhoed 2013a).

Figure 2: Two remote participants interact in a screen interface during the performance *Panorama: A Multimedia Happening* (2009) by Smith/Wymore Disappearing Acts. Photography by Sheldon Smith.

Contemporary examples of high-tech telematic performance are seldom presented in regular theatre touring circles, as these cannot provide the necessary technological means, and are either presented at technology-orientated events or remain within research institutions. Examples of such performances are *Panorama: A*

Multimedia Happening by Smith/Wymore Disappearing Acts (2009, linking the University of California at Berkeley and the University of Illinois at Urbana-Champaign) and *Ukiyo (Movable Worlds)* by Johannes Birringer (2010, linking London and Tokyo).

Examples of low-tech telematic performance have recently started to emerge in alternative theatre and performance circles, as well as in visual art circles. Examples include *Skype Duet* by Brina Stinehelfer/Per Aspera Productions (2011, linking a theatre venue in Berlin and a café in New York), Annie Abrahams's *ON LOVE* (2013, linking a theatre venue and nine English-speaking performers from their private homes located all over the world) and Helen Varley Jamieson and Paula Crutchlow's *make-shift* (2010, linking two private homes).

Figure 3: Two groups of participants, one located in Trondheim and the other in Belgrade, interact through Skype in the performance *Random Friends* (2011) by Pérez and Spanjévic. Photography: David Molinedo Fernández.

As a genre, telematic performance traces back to the 1980s, when video conferencing enabled remote visual connection, allowing artists like Nam June Paik to 'begin to (telematically) talk, simply to (telematically) talk' (quoted in Dixon 2007, 420). Pioneering works include *Telematic Dreaming*, created by Paul Sermon in 1994, which connected two remote beds, and *Escape Velocity*, created by Australian Company in Space (2000, linking Melbourne and Monaco). The field of

contemporary dance has extensively experimented with telematic technology, producing a vast variety of performances and contributing theoretically to the understanding of this category (Birringer 2000; Kozel 2007).

According to Dixon (2007), telematic performance reached its most prolific stage at the end of the 1990s and beginning of the 2000s, then fell into a stage of low production. The genre is now having a comeback thanks to the low-tech practices mentioned above.

1.2.3 Pervasive Performance

Pervasive performance is an emergent genre that seeks to engage audiences in massive participatory events through a combination of games, media and performance. In this thesis, I define pervasive performance as a mixed-media event that combines gameplay with performance, and uses the event as a platform for potential collaborative art-making in public spaces for a playing audience.

The technology in use is a combination of mobile media and other media, such as Internet platforms or social media, which are generally called *ubiquitous media*, as they allow participants to be distributed across public and private spaces, constantly connected, on the move and tracked by GPS.

Pervasive performance was born at the turn of the twentieth century out of the convergence of ubiquitous media, experimental game design and contemporary theatre and performance that resulted from exploring the use of the latest media revolution—ubiquitous media—for creative expression. This category includes similar phenomena such as pervasive games, alternate reality games, live-action role-play (LARP) and some flash mobs. The hybrid nature of these forms makes it difficult to draw clear lines and discern the boundaries between them; hence, the definition is broad. What pervasive performances all have in common are: a) the mix of performance and games; b) the focus on massive participation; and c) the use of public space.

Figure 4: Participants follow instructions that are individually delivered to them through a headset, to collaboratively re-enact a movie as part of the performance *Dominio Público* (2008) by Roger Bernat, Puerto Natales, Chile. Photography: Blenda.

Examples come from research networks in collaboration with artists, such as *Rider Spoke* (2007) by the British Blast Theory, *Call Cutta in a Box* from German Rimini Protokoll or *Dominio Público* (2008) by Spanish Roget Bernat, and from lay initiatives outside of regular art circles such as *SFZero* (*Playtime* 2006)—a collaborative production game and performance platform created out of San Francisco, California. An important example in this category is *Chain Reaction* (2009 and 2011), the performance experiment created by myself and a team of collaborators as part of this research project.

There are different ways of arranging this field, but, for my purposes, the initial categorisation into three technologically defined types of performance was crucial in helping me find a way into the vast and messy field of digital performance while simultaneously allowing me to map the state of the art at this historical point. As an alternative approach, I could have arranged the thesis according to the way in which different case studies of digital performance challenge specific conventions. For example, Benford and Giannachi (2011) analysed how *mixed reality performance* (what I am calling here *pervasive performance*) impacts the conventions of space, time, interaction, spectatorship, authorship and orchestration. Theirs was a very clean

and well-structured work, made possible because they only examined one phenomenon: mixed reality. However, I wanted to study more than one category, and therefore needed to organise a vast amount of material before I could begin analysis. Dixon's study, *Digital Performance* (2007), arranged a large variety of phenomena. In his study, he grouped different categories, such as 'virtual reality' or 'telematics', according to their impact on performance space. Other elements included in the study were 'body', 'time' and 'interactivity'. This arrangement of material was productive, as it initially included a vast amount of phenomena, then narrowed these down to a well-packed set of conclusions in four elements. However, this arrangement was also limiting, since it forced each element into a single category, even though some elements could have fallen into several. For example, Dixon defined the category of telematics as challenging 'space', even though much could be said about how telematics challenge 'the body' or 'interactivity', as well.

For my purposes, it was important to start the study by building a categorisation that mapped the field in a loose way, and to compose this categorisation according to the technology that was applied to performance. I wished to let the categories tell me what conventions each technology challenged. Once I identified these conventions, I proceeded to compare their similarities and differences across categories. Hence, this study used the categories as a starting point and ended with a cross-examination of the conventions. I believe that, in this way, I was able to encompass a large variety of phenomena while simultaneously tracking the development of a convention across categories, going from the rather established multimedia theatre to the more emergent forms of pervasive performance, and to 'measure' the different degrees to which a convention was challenged.

Of my three categories, multimedia theatre diverges the least from traditional theatre. In this study, I did not delve into it as much as I did the other two categories, as I found that conventions were more radically challenged in telematic and pervasive performance. However, the presence of multimedia theatre in this study was important, in that it constituted a point of departure and means of measurement in terms of the way in which technology challenges traditional conventions in theatre. In this thesis, it serves the purpose of being the category from which the other two, which are more recently emerging categories, measure their distance.

An advantage of this tripartite categorisation is that the findings cover a variety of practices, rather than focusing on one phenomenon that could easily cease to exist.

1.3 Object of Study and Research Questions

This thesis investigates the ways in which the field of contemporary performance is challenged and impacted by digital media. It aims to examine traditional performance conventions that are challenged in and across the three categories suggested above.

Theatrical conventions are established agreements that relate to the elements that compose a theatre or performance event, and are considered established ways of working within the theatre world; these may, for example, pertain to the role of the actor, the role of the audience, the stage, the design, the costumes and the relationship of the audience to the stage. For instance, the conventions that govern the genre of improvisation prioritise the relationship and generation of energy between the performers, and between the performers and the audience, over other conventions, such as the dramaturgy of the text (Johnstone 1979; Frost and Yarrow 2007). Theatrical conventions are broader than the concept of dramaturgy, which often refers to the grammar of performance and is restricted to the stage and mainly focused on the dramatic text (Corrigan 1992). In this sense, theatrical conventions involve dramaturgy, but go beyond it by including ways of thinking about the role of individual elements and their behaviours. For example, one of the conventions examined in this thesis is the changing role of the audience as a result of the application of technology.

In this research, I did not aim to identify all of the conventions that operate in each of the categories I had formed. Nor did I attempt to draw clear division lines between these three categories in order to make them more secure and separated, as it was not my purpose to establish a typology of digital performance genres and sub-genres.

It was also not my aim to identify all relevant theatrical conventions in today's theatre scene. I am very aware that I studied emergent genres of a limited extent, and so it is not my intention here to generalise my findings to encompass the entire performance field.

The primary research question guiding this study was the following:

How do digital media challenge and/or re-configure traditional conventions in contemporary performance?

More specifically, this research project analysed performance conventions that are challenged across the categories suggested above; this is investigated both theoretically and practically in the articles, and is systematised in chapter 6. Structurally, through the articles, instead of focusing on one category in order to flesh out all conventions and the different ways and degrees to which they are challenged, I focus on one convention at a time and show how it changes as different media are applied.

By drawing a comparative analysis that shows differences and similarities, I aim to show the behaviour of a particular convention, bringing forward the nuanced ways in which it changes. As some conventions are challenged more radically through the application of a technology than are others, I convey a better understanding of the different degrees and intensities to which a convention might change.

Once I identified and fleshed out the challenged conventions, I applied the following secondary research questions:

How can the use of media serve the artistic practice and/or benefit the aesthetic expression? And conversely: *Are there instances in which the use of media restricts artistic practice and/or disrupts the aesthetic expression?*

These questions were put against each other to balance the approach and to avoid a potential celebratory view of media as bringing positive change, in itself. These two questions are addressed repeatedly in relation to all categories in the articles.

Finally, to ensure a realistic outcome, I studied the historical context of the reconfigured conventions, in search of theatre and performance genres that aimed to challenge the same conventions previously in history, before today's technology existed, asking:

To what extent are the challenges and affordances posed by digital media to contemporary performance today fundamentally new?

In answering this question, my aim was to identify what exactly is new—if anything—at the convergence of digital media and contemporary performance.

As I explored the interrelation between digital media and performance, I also hoped to be able—though to a lesser extent—to contribute to an investigation of the

opposite end; namely, how performance may contribute to a better understanding of digital media.

To a limited extent, I also applied a fourth research question to my material:

How can performance contribute to a better understanding of the use of digital media?

It is important to note that I did not aim to contribute to the understanding of the field of digital media to the same extent as the field of performance, as this could not possibly have been covered within the scope of this research project. However, as a result of the investigation, I developed some valuable insights in this regard.

1.4 Concept Clarification

In this section I shall define the way in which I apply several relevant concepts that appear throughout this thesis.

1.4.1 Contemporary Performance

A common, agreed upon definition of what constitutes contemporary theatre and performance does not exist. The Contemporary Performance Network defines contemporary performance as 'hybrid performance works and artists that travel between the fields of experimental theatre and dance, video art, visual art, music composition and performance art without adhering to one specific field's practice' (Manson 2011). The *Contemporary Theatre Review* journal (Taylor and Francis 2011) points to how it has a 'focus on productions that bring together different artistic traditions, or a consideration of how theatre engages with social and political realities'. To compose a definition that could suit my purposes in this thesis, I combined these two definitions into one that points to the mixing of the art traditions, placing theatre and performance practices under the term 'performance' and connecting performance to current social and political issues.

1.4.2 Media

This thesis investigates the relationship between contemporary performance and other media, specifically digital media. The term 'digital media' refers to technology that produces digitised (as opposed to analogue) content such as text, audio, video, graphics and metadata, as a means for communication.

The medium of contemporary performance—or theatre's medium specificity—has been located in the bodily co-presence of actors and spectators, who exchange energies in an auto-poetic feedback loop (Fischer-Lichte 2008). I was interested in the way in which contemporary practices often blur the boundaries between medium-specific art forms, incorporating different media and forms, such as dance, music, video and sculpture, in a single performance event. Using the shared coordinates of actors and spectators in time and space as the central quality defining the medium of performance makes it possible to analytically differentiate between the medium of performance, on the one hand, and the use of other art forms and media in performance, on the other.

The application of other media to the medium contemporary performance, uniting live and mediated elements within the frame of performance, results in *intermedia theatre*. The concept of *intermedia* refers to the simulation of conventions and patterns of perception in one medium by another (Chapple and Kattenbelt 2006), and is based on the concept of *remediation*, defined as 'the formal logic by which new media refashion prior media forms' (Bolter and Grusin 2000, 273). Intermediality here implies an in-between space between previously assumed ideas of medium specificity.

The practices that I analyse in this thesis are intermedial: they incorporate other media as an integral part of a performance. In this thesis, I investigate the ways in which these inclusions of media change the medium of theatre, with a particular focus on the inclusion of various forms of digital media in contemporary performance.

1.4.3 High- and Low-Technology

The concepts *high-tech* and *low-tech* are multidisciplinary terms. They do not belong to a field of study, in particular, but are used in any field in which there is developing technology, from electronics to nanotechnology, artificial intelligence, telecommunications and so forth.[6] The word *technology* comes from the Greek word

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[6] The term 'high-technology' traces back to the 1957s, when it appeared in a *New York Times* article advocating the use of atomic energy in Europe: 'For Western Europe, with its dense population and its high technology, the prospect of atomic power offers a special challenge and opportunity' (*New York Times* 1957). The term 'low-technology' appeared soon afterwards, in opposition to high-technology, being defined as not involving high-technology.

τέχνη, or *techne*: 'art, skill, craft, or the way, manner, or means by which a thing is gained'; and -λογία, *-logos*: 'word, the utterance by which inward thought is expressed, a saying, or an expression', meaning words or discourse about the way things are gained. The modern use of the term technology has come to refer to 'organized inorganic matter', or, in other words, mechanical devices *per se* (from tables to gadgets); however, even the term 'technology' can also refer to ways of creating things that serve human beings, or 'the pursuit of life by means other than life' (Stiegler 1998).

The *Oxford English Dictionary* defines *high technology* as 'advanced technological development' (2014a) and *low technology* as 'less advanced or relatively unsophisticated technological development or equipment' (2014b). These broad definitions point to the degree of sophistication of a technology as the criterion to follow—a very generic and subjective criterion that is seldom helpful, since what is deemed as advanced depends on who characterises it as such, and in what context.

In the arts field, the use of high- and low-tech as descriptors of performance is inconsistent, and these terms are often used in reference to slightly different things. This is because the groups involved in the production of such work come from different disciplines, have different backgrounds and thus use different criteria when talking about these works. Another reason is, as explained above in relationship to the Shock and Awe aesthetic, the different groups involved in the creation of these performances blur the divide between high-tech and low-tech in an effort to pass their work as the other. For example, some performance works—such as *make-shift* (Jamieson and Crutchlow 2010), analysed in this thesis—claim to pass as low-tech because they want to connect with the philosophy of open source movements; however, they may have been designed (in part) with the most advanced technology available, in collaborative teams with engineers. Inversely, we find performances that advertise themselves as high-tech in an effort to ascribe to prestige, technological innovation and cutting edge research, but which use really simple, low-tech technology; this is true, for example, of most of the work of Robert Lepage. This lack of agreement is enhanced by the fact that, in the actuality and availability of current technology, the divide between high-tech and low-tech is subjected to rapid shifts, and works that are at one time considered high-tech may rapidly fall into the category of low-tech.

The way I use high- and low-tech in this thesis when referring to performance is by combining the criterion of sophistication with the criterion of *the conditions of production under which performance is created*: whether this requires collaboration with external partners in charge of technology (high-tech) or whether the technology is arranged using resources that are commonly available to the theatre ensemble (low-tech).

1.4.4 Game Concepts

The concept of *game* in this thesis follows the understanding proposed by Jane McGonigal. In trying to make an open-ended definition that could encompasses all game genres, regardless of the technology utilised, she argued that 'all games share four defining traits: a goal, rules, a feedback system, and voluntary participation' (2011, 21). The games I analyse in this thesis have creative goals such as devising a performance, composing a story or singing a song. As the goals are rather openly defined, the feedback system applied to evaluate outcomes is also rather open. The rules presented to players indicate procedures that must be followed, as well as what can or cannot be done. However, the rules applied in this work are closer to the open-ended instructions that guide play and experimentation, than to the formal rules found in strictly competitive games. Finally, games are voluntary events that participants agree to take part in.

While a difference can be described between gaming and playing, the games I analyse in this thesis blur the boundary between these two concepts. Game and play have a history of antagonism, wherein play (*paidia*) has been deemed as a free, liberating form of experimentation at the core of artistic production, and game (*ludus*), on the contrary, has been seen as an institutionalisation (even a corruption) of play.[7]

Within the art world, Allan Kaprow articulated the conflict between game and play in the following manner: 'Play, of course, is at the heart of experimentation [….]

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[7] Roger Caillois defined play as having six main characteristics: 'It is free, or not obligatory; it is separate (from the routine of life) occupying its own time and space; it is uncertain, so that the results of play cannot be pre-determined and so that the player's initiative is involved; it is unproductive in that it creates no wealth and ends as it begins; it is governed by rules that suspend ordinary laws and behaviours and that must be followed by players; and it involves make-believe that confirms for players the existence of imagined realities that may be set against "real life"' (Caillois 2006, 128). He also classified games in four large categories, 'Agôn', 'Alea', 'Mimicry' and 'Illinx'. Most importantly, he thoroughly discussed the tensions between the concept of 'paidia' (improvisation, joy, turbulence) and 'ludus' (commodification, professionalisation, institutionalisation).

Gaming involves winning or loosing a desired goal. Playing is open-ended and potentially, everybody "wins". Playing has no stated purpose other than more playing. It is usually not serious in content or attitude, whereas gaming, which can also involve playing if it is subordinated to winning, is at heart competitive' (2003, 250).

In his view, gaming is a corruption of play: while play is the real liberating and empowering action, games are fundamentally limiting practices. I, however, observe that the games analysed in this thesis also have the potential to release playfulness and creativity. By combining open-ended instructions with the application of a game rhetoric, gaming may create conditions for releasing creative exploration and experimentation. In my view, rules, goals and even competitiveness may be used in this service.

This thesis focuses on pervasive games, which are defined as 'a game that has one or more salient features that expand the contractual magic circle of play spatially, temporally or socially' (2009, 12). The 'magic circle of play' refers here to the imaginary boundary that separates the rules of the game with the rules of society and makes it acceptable to do certain things in games that are not acceptable in society. 'Pervasive games pervade, blend and blur the traditional boundaries of game, bleeding from the domain of the game to the domain of the ordinary' (12).

A consequence of the current convergence of games and performance in *Chain Reaction*—but also in general, as I examine the category of pervasive performance—is that concepts defined within game studies, such as *gameplay*, *game mechanics* and *playtesting* are used in relationship to theatre. *Gameplay* refers to 'the degree and nature of the interactivity that the game includes, i.e., how players are able to interact with the game-world and how that game-world reacts to the choices players make' (Rouse, 2005, s. xx). *Game mechanics* refers to the rules, or the obstacles that regulate what players can and cannot do: 'the interactions and relationships that remain when all of the aesthetics, technology, and story are stripped away' (Schell 2008, 129). *Playtesting* refers to the creative method by which the game is created, wherein game mechanics are tested and refined: 'It is something that the designer performs throughout the entire design process to gain an insight into how players experience the game' (Fullerton 2014, 271).

These concepts relate to existing ones in the fields of theatre and performance. Gameplay has parallels with the concept of improvisation, game mechanics/rules resemble the concept of instructions, and playtesting is related to the concept of

rehearsal. In combining concepts from performance and games, I try to come to terms with the hybrid practices that are the subject of this thesis.

Chapter 2: *Chain Reaction*

Chain Reaction is a hybrid form of game and performance that was developed through the process of practice-based research as part of this PhD project. It aims to encourage participants to engage artistically with public spaces and ultimately create and perform a short performance piece as a result of their interaction within the urban environment. Among other sources, it draws inspiration from Happenings, improvisation and New Media Art, seeking to engage participants in massive collaborative events in public spaces through a combination of gameplay, media and performance.

In this chapter, I describe *Chain Reaction* in the context of related historical and contemporary examples. By thoroughly describing the performance early in the thesis, I hope to establish a clear ground for the analyses in the articles; *Chain Reaction* is the main case study in articles 1, 2 and 3, and used in combination with other case studies in article 6. I start this chapter by eclectically describing the historical background from which *Chain Reaction* emerged, relating it to forms of avant-garde art and theatre, participatory art and New Media Art. Placing *Chain Reaction* as part of a historical family of related artworks allows me, in the second part of the chapter, to describe and bring forward the main characteristics of the production.

2.1 Related Works

During the last decades, the emergence of artworks that foster audience participation have proliferated across the performative arts. The three fields in which these practices have emerged are those of the visual arts (including performance), theatre and game.

In the realm of visual art, we find participatory art projects taking place in galleries and museums. One such example is the work of German Tino Sehgal and his *constructed situations*, particularly *This Progress* (2010), in which visitors are ushered by a series of guides who engage them in conversation about the topic of progress; or the work of Thai Rikrit Tiravanija, with his cooking installations in the museum. In his early landmark piece from 1992 titled *Untitled (Free)*, Tiravanija converted the gallery into a kind of restaurant in which he cooked curry and rice for the audience, who sat down at different tables and discussed the work.

In theatre, we find the work of the German performance collective Rimini Protokoll and their staging of non-actors in *The 100% City* series (2008 and ongoing),[8] in which 100 non-actors are invited on stage to make decisions on behalf of all of a city's inhabitants, live on stage, as a way of creating a representative assembly of citizens from all levels of society through theatrical means. A work in which new technology is used as a tool to foster audience participation in a live event is that of Catalán theatre director Roget Bernat, with *The Rite of Spring* (2010). Employing headsets (one per person), a voice sends different sets of simple performance instructions—such as 'raise an arm' or 'bend your knee'—which end up in the collective re-enactment of the famous choreography that Pina Bausch created in 1975. A performance that uses technology as a way to create a shared performance space even while participants are physically apart is *Surrender Control* (2001), an SMS-based performance by Tim Etchells, director of the influential UK-based theatre group Forced Entertainment; in this performance, participants are asked to carry out certain instructions that are transmitted to them over SMS over a period of five days.

In the game field, we have examples of pervasive games such as *Cruel 2 B Kind* (2006), created by designers/researchers Ian Bogost and Jane McGonigal, in which groups of players *kill each other* with compliments in the city space, and PacManhattan (2004), designed by a group of graduate students at NYU, in which the digital game Pac-Man is transposed onto the real environment of Manhattan, and digital avatars are substituted for humans, who are chased across the city space. Hybrid forms that combine performance and gaming with new technology include the work of the British collective Blast Theory, known for blurring the line between the

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[8] The first performance of the 100% City series took place in Berlin in 2008. Since then, Rimini Protokoll has been adapting the performance format for new cities. The popularity of the 100% City series has increased dramatically in the last years, being staged in six different cities across the globe in 2013 and seven cities in 2014.

physical and the virtual. They have created seminal works such as *Can You See Me Now?* (2001) and *Rider Spoke* (2007), both location-based games in which players are instructed to explore their personal and subjective relationships with city space.

2.2 Historical Context

Certainly, participatory forms of art did not emerge in the 1990s, but are part of a longer historical tradition. In this section, I present a history of art forms that precede and relate to *Chain Reaction,* from neo avant-garde art and theatre, participatory art and New Media Art.[9] The examples include works that either inspired, or may inform our understanding of, *Chain Reaction*. I have aimed to order them chronologically. However, as some of these practices overlap in time, the time order might not always be clear.

2.2.1 Neo Avant-Garde Art: Happenings, Fluxus and the Situationist International

Happenings were born in the mid-50s in the United States as a reaction to formalism in painting, as articulated in the writings of Clement Greenberg. One of the most important figures of the Happenings, and certainly its most fervent theoretician, Allan Kaprow, coined the term 'Happenings' in one of his most celebrated essays, 'The Legacy of Jackson Pollock' (1958). Happenings are difficult to define. Kaprow referred to them as 'playful social activities' in which the use of play generates 'audienceless events' and allows the audience to become involved in the creative process.[10] Kirby defined them as 'a purposefully composed form of theatre in which diverse alogical elements, including non-matrixed performing, are organized in a compartmented structure' (Kirby 1965, 21); this definition highlights the importance of composition in an event in which chance and coincidence are supposed to 'happen'. This focus on composition was inspired by the work of John Cage, whose

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[9] I chose to leave the historical avant-garde out of this context, as it did not directly influence me in my work with *Chain Reaction.* However, I do acknowledge its historical relevance along with, for example, early modernist experiments in scenography (which I discuss in different parts in the thesis).

[10] In the essay 'Happenings in the New York scene', Kaprow discussed the main characteristics of Happenings. For example, he argued that 'Happenings are events that, put simply, happen' (16). He also discussed the contrast between Happenings and theatre plays, involvement in chance principles and Happenings' resistance to reproduction (2003, 15–26).

exploration of the application of chance elements in his work as a principle of music composition and performance also permeated the Happenings (and Fluxus).[11]

For Kaprow, Happenings are events that are constructed following a combination of chance principles and playful instructions. To him, play is a very important element of these events.

In the essay 'The Legacy of Jackson Pollock' (1958), Kaprow advocated for art to be grounded in the ordinary materials of everyday life and public space, rather than a separate sphere inside cultural institutions such as museums or theatres.[12] He argued:

> Pollock, as I see him, left us at the point where we must become preoccupied with and even dazzled by the space and objects of our everyday life, either our bodies, clothes, rooms, or if need be, the vastness of Forty-Second Street.… Objects of every sort are materials for the new art: paint, chairs, food, electric and neon lights, smoke, water, old socks, a dog, movies, a thousand other things that will be discovered by the present generation of artists. Not only will these bold creators show us, as if for the first time, the works we have always had about us but ignored, but they will disclose entirely unheard-of *happenings* and events, found in garbage cans, police files, hotel lobbies; seen in store windows and on the streets.… All will become materials for this new concrete art. (1958, 9)

Here, Kaprow makes very clear the idea that would be central throughout his career: the potential and legitimacy of the everyday and ordinary for art-making. Happenings' use of a combination of chance and play to engage audiences in playful social activities and their advocacy of making art out of the materials of ordinary, everyday life, were important inspirations for *Chain Reaction*.

Aiming at occupying a productive space of creativity between game rhetoric and evocative instructions, *Chain Reaction* was also influenced by Yoko Ono's famous instruction pieces, which were part of the Fluxus movement. Fluxus is characterised by its aim of developing anti-commercial aesthetics—strategies of

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[11] John Cage taught a series of experimental courses at different institutions in the United States, through which he shared his principles of composition. These courses became a kind of a multidisciplinary hub for artists, a popular site for the exchange of ideas. Some of the participants later became involved in different art movements that applied Cage's principles to other forms; for example Happenings and Fluxus.

[12] This short essay contains Kaprow's most visionary ideas, as he conceptualised Happenings as an art form and envisioned artists' concerns for the decades to come.

creating works that cannot be commercialised; therefore, it is described as 'anti-art' (Maciunas 1963). The Fluxus movement produced *event scores*, which could usually be performed by one person with minimal materials. In this way, the work was separated from its author and put in the hands of the audience, whose task was to bring it to life. 'Scores are seen as tools for something else, scripts for a performance or musical script which is the "real art"' (Kotz 2001, 57).

A very useful example of the Fluxus movement is Yoko Ono's book, *Grapefruit* (1971), which is a collection of short, open-ended instructions and meditative texts that readers can follow as a way to stir their imaginations.

MAP PIECE

Draw an imaginary map.
Put a goal mark on the map where you
want to go.
Go walking on an actual street according
to your map.
If there is no street where it should be
according to the map, make one by putting
the obstacles aside.
When you reach the goal, ask the name of
the city and give flowers to the first
person you meet.
The map must be followed exactly, or the
event has to be dropped altogether.

Ask your friends to write maps.
Give your friends maps.

1962 summer

Figure 5: Screenshot from *Grapefruit*. Source: Improvisedlife.com

Liz Kotz explained how 'these texts can be read under a number of rubrics: music scores, visual art, poetic texts, performance instructions or proposals for some kind of action or procedure' (57). I read the score 'Map Piece' as a game, mixing the language of art and the language of games. The 'piece' (using the vocabulary of visual arts—an 'artpiece' or 'artwork') is framed as if it were a game. It uses the rhetoric of games, with imperative verbs such as 'draw', 'put', 'go' and phrases such as 'When you reach the goal, then…' (line 9). The structure of the score sets up obstacles, in order to create challenges and stimulate a sense of effort in the participant. For example, line 11 asserts: 'The map must be followed exactly, or the event has to be dropped altogether'.

The way in which *Chain Reaction* aims at making participants experience place with new and fresh eyes can be seen in light of the Situationist International (SI) movement of the 1950s and 1960s in France. Inspired by the Dada excursions and Surrealist nocturnal strolls, the *derivé*, or goal-less drifting, was employed by artists and intellectuals to increase one's awareness of urban surroundings. Guy Debord wrote: 'In a derivé one or more persons during a certain period drop their relations, their work and leisure activities, and their usual motives for movement and actions, and let themselves be drawn by the attractions of the terrain and the encounters they find there' (77). What is relevant here is the understanding that public space has aesthetic potential, waiting to be discovered. Debord's 'goal-less drifting' and the playful experimentation of Kaprow are related in that they are both attitudes of discovery.

2.2.2 Improvisation and Theatresports

Chain Reaction encourages participants to develop a playful attitude in a manner that can be connected to a form of improvisation. Improvisation (or 'impro') developed mainly in Europe and the United States during the 1950–70s as a new approach to actor training, a new type of ensemble production and a new art form.[13]

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[13] Improvisation in theatre has been developed and shaped by individual contributions from different practitioners (actors, directors) who, each in their own way, have applied the principle of improvisation to theatre with different intentions and attitudes. There have been many important contributors to improvisation as a form, but some of the more important names include Konstantin Stanislavsky, Jacques Copeau and Suzanne Bing, Michel Saint-Denis, Jacob Levy Moreno, Viola Spolin, Paul Sills, Clive Barker, Del Close, Keith Johnstone, Jerzy Grotowsky, Darío Fo and Franca Rame, and Augusto Boal.

Frost and Yarrow defined improvisation as: 'the skill of using bodies, space, all human resources to generate a coherent physical expression of an idea, a situation, a character (even, perhaps, a text); to do this spontaneously, in response to the immediate stimuli of one's environment, and to do it *á l'improviste*: as though taken by surprise, without preconceptions' (4).

Using the body to express an idea, spontaneity, acknowledgement and responsiveness to one's environment, as well as the ability to leave aside preconceptions, are skills that participants acquire in impro.

Frost and Yarrow (2007) argued that '[i]mprovisation is not just a style or an acting technique; it is a dynamic principle operating in many different spheres; an independent and transformative way of being, knowing and doing'(17). Improvisators develop a kind of improvisation *attitude*.

Improvisation is strongly connected with the concepts of play and games, which the practitioners mentioned above used in different ways and for different purposes. For example, Jacques Copeau and Suzanne Bing used games to help actors access important and deep material for the stage. In the rise of improvisation, there were close links between new dramatic forms and the field of progressive education, in which the ideas of philosopher John Dewey inspired educators to explore the relationship between learning, playing and active experiencing. Viola Spolin, who was devoted to improvisation's spiritual and psychological release of human potential, created different improvisation formulas in which play and games were fundamental, such as *sketch-based improvisation* and the *audience-request system*, to mention a few (Spolin 1999). Frost and Yarrow argued that many practitioners:

> used the term 'players' in preference to 'actors'[….] This is part of a deliberate strategy, accompanied by a relaxed and apparently non directive manner, to help participants feel at ease. 'Playing' suggests a game in which everyone can take part, and in which there are more rewards than penalties; it takes the heat off the rather threatening nakedness of improvisatory situations [….] So, too, 'play' admits the possibility of making mistakes, or rather allows the chance for what we might think of as 'mistakes' (if we are thinking about 'giving a good performance') to be re-evaluated as possibilities of new directions. (2007, 82–3)

Keith Johnstone's Theatresports also has an important link with *Chain Reaction*, in that both use the frame of a game and adapt it for the purpose of making theatre.

As published in his book, *Impro* (1979), Johnstone developed his ideas on impro while working at the Royal Court Theatre in the 1950s; however, he was also inspired by professional wrestling competitions, which he viewed as 'working-class theatre'. He wanted to recreate the heat and effervescence between wrestlers that he saw in wrestling competitions, as well as the tensions between wrestlers and the audience. In order to generate a similar type of energy, he adapted the format of the wrestling competitions by simply replacing the wrestlers with drama improvisers; in this way, he gave birth to Theatresports (Foreman and Martini 1995).

Theatresports requires the audience to present the actors with acting challenges/tasks, and to judge who does the best improvisation; this is similar to the audience role in (non-professional) wrestling competitions. The heat of the moment that Johnstone referred to is the way in which the audience, with their hailing and cheering, can affect outcomes.

2.2.3 Theatre for Social Change: Applied Theatre

Chain Reaction's engagement with the local environment to bring forward the dramatic potential of the city and the stories embedded in them connects with the tradition of *community theatre,* today also commonly referred to as *applied theatre*. Applied theatre is a term that gained momentum in the 1990s, and it is useful because it encompasses different forms that share the same aim: using theatre in the service of societal contexts and social change.[14] Community theatre arose in the 1960s and 1970s with the aim of empowering local communities through drama/theatre processes. As understood by Eugène Van Erven, community theatre has 'an emphasis on local and/or personal stories (rather than prewritten manuscripts) that are first processed through improvisation and then collectively shaped into theatre' (2001, 2).

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[14]Applied drama has been used to describe 'forms of dramatic activity that primarily exist outside conventional mainstream theatre institutions, and which are specifically intended to benefit individuals, communities and societies' (Nicholson 2005, 2). 'Different practices under the umbrella of applied theatre are: community theatre, community performance, theatre for social change, popular theatre, interventionist theatre, drama in education, theatre for integrated rural development, participatory performance practices, process drama/theatre, prison theatre, theatre in health/education, theatre for development, theatre for conflict resolution/reconciliation, reminiscence theatre and so on' (Prentky and Preston 2009, 9).

In community theatre, 'the participating community are also the performers, who have a substantial input during the creative process' (2). To do this, 'they are guided either by outside professional artists—who may or may not be active in other kinds of professional theatre—or local amateur artists residing among groups of people that, for lack of a better term, could perhaps best be called "peripheral"' (2). It is due to this peripheral nature that community theatre is 'generally distinguished from high-art, mass culture, and mainstream as well as avant-garde theatre, and frequently occurs outside "legitimate" art milieux' (2).

Another relevant aspect of community theatre is that, in the process of using theatre as a tool to help local communities express their concerns through a dramatic form, it simultaneously stages non-actors.

The way in which *Chain Reaction* aims at creating an audience-participant who not only acts, but also reflects on her acting, was inspired by Augusto Boal's development of *Spect-Actors* in Forum Theatre. Forum Theatre is one of the several theatre forms that Boal devised as part of his Theatre of the Oppressed—which he established, together with the Workers' Party (PT), in the early 1970s—a participatory theatre form that fosters democratic and cooperative forms of interaction among participants.

In Boal's Forum Theater, the actors begin with a dramatic situation from everyday life, a political or social problem with a difficult solution and of an oppressive nature. Audience members are invited to intervene by stopping the action, coming on stage to replace actors and leading the action in the way that seems most appropriate. 'Bridging the separation between actor (the one who acts) and spectator (the one who observes but is not permitted to intervene in the theatrical situation), the Theatre of the Oppressed is practiced by "Spect-Actors" who have the opportunity to both act and observe, and who engage in self-empowering processes of dialogue that help foster critical thinking' (Appelbaum 2002, 83). Boal argued: 'By taking possession of the stage, the "Spect-Actor" is consciously performing a responsible act' (2008, xxi). He continued, 'he exists in the scene and outside of it, in a dual reality. By taking the stage he is also acting in his social reality. By transforming fiction, he is transformed into himself' (xxi). The performance is understood as a conscious intervention—a rehearsal for social change born out of a dynamic exploration between reflection and action.

The Theatre of the Oppressed was often site-specific, performed in town squares, city halls, schoolyards, prisons and so forth; it literally moved the theatre to sites where the social problems to be tackled were taking place. Site-specific performance was defined by Nick Kaye as 'practices (that) *work over* of the production, definition and *performance* of place' (Kaye 2000, 3, emphasis in the original). In other words, performance specifically generated from or for one site, wherein layers of the site are incorporated in or discovered through performance; this stands in contrast to performance that is merely imposed on a location. According to Pearson and Shanks (quoted in Birch and Tompkins 2012, 3), the relationship between the two core concepts 'place or site' and 'performance' is most contested. Merely placing the concepts together is insufficient; rather, they must inform each other, so that an active relationship between them remains fluid (3).

2.2.4 Relational Art

During the last decades, artworks that foster audience participation have proliferated across the performative arts. These practices share a wish to subvert the traditional relationship between the art object, the artist and the audience, so that the artist is no longer an individual producer of objects but a facilitator or orchestrator of situations. These practices problematise the concept of 'part-taking' or 'participation', and force us to re-think the role of the spectator.

The way in which *Chain Reaction* aims at creating situations in which social interactions become the artwork is connected with Relational Art. The etiquette of Relational Art was used by Nicholas Bourriaud in his text *Relational Aesthetics* (1998) to refer to the work of certain practitioners at the beginning of the 1990s, such as Rikrit Tiravanija, Philippe Parreno and Henry Bond, which did not quite fit the line of work conventionally presented in galleries and museums. These artists were interested in exploring the different forms of social interaction made possible inside the gallery space. Relational Art takes the form of a social experiment, and puts social interactions at the centre of the work. According to Bourriaud, 'rather than paint, clay or canvas, "intersubjectivity" is itself the substrate of the art event' (1998, 14). The focus is on community-making and doing, rather than only observing, and is aimed at legitimising 'human relations and their social context, rather than an independent and private space' (113).

The theoretical sources that aim at coming to terms with these works have described them as 'relational' (Bourriaud 1998), 'dialogic' (Kester 2004) and 'heterogeneous' (Jackson 2011). The debate in this field has been about the ways in which these works use different participatory strategies to blur the line between the aesthetic and the social.

Relational Art intervenes in the space of the gallery by putting it to a different use and therefore breaking the conventions that normally operate within it: visitors are asked to do, rather than to observe.

However, it is relevant to note that Relational Art also aims at creating critical reflection. In Tiravanija' piece *Untitled (Free)*, mentioned above, he not only cooked curry and rice for the audience, but, most importantly, he asked them to sit, eat and discuss the work. He also aimed at developing critical reflection in his audience-participants by creating the dynamic of a shared social activity and asking them to reflect on the relationship between their own doing and art as a process/object; this is similar to the way in which Boal aimed at creating a fluid dynamic for action and reflection in his Spect-Actors.

2.2.5 New Media Art

New Media Art employs digital media to create interactions between a mediated artwork and its users. The term *New Media Art* emerged in the middle of the 1990s to describe 'projects that make use of emerging media technologies and are concerned with the cultural, political, and aesthetic possibilities of these tools' (Tribe, Jana, and Grosenick 2007). It includes artworks such as interactive multimedia installations, net art, virtual reality, video games, computer robotics, computer animation and so forth: works that are considered part of the broad concept of digital performance, as mentioned in the introduction. Beryl Graham and Sarah Cook (2010) defined New Media Art as a 'set of behaviours', rather than a concrete medium. This idea is supported by curator Steve Dietz, who argued that New Media Art implies interactivity, networks and computers, and often focuses on creating processes, rather than objects (2010).

Belonging to this context we find video games. According to major theorists in the field (McGonigal 2006 and 2011; Bogost 2007), the rising status of gaming in society has brought about a process known as *gamification*, defined as 'the use of game design strategies in non-game contexts' (Deterding et al. 2011). Games can be

used in order to do 'something else'—that is, something other than encouraging purely ludic activity; for example, one can now play to learn, to work, to consume, to foster social change and so forth. This idea has materialised in several genres that aim at tackling how games can be used in non-game contexts, resulting in labels such as *serious games*, *persuasive games*, *games for change* and *games with an agenda.*

Some serious games can also be *pervasive games*—games that use the real world as a playground rather than games that are played solely on a computer interface. The body of theory concerned with such works has focused on the benefits and challenges of taking gaming into the real world, and the implications of mixing digital interfaces with real playgrounds (McGonigal 2006; Montola, Stenros, and Waern 2009; Benford and Giannachi 2011). Examples of hybrid forms of pervasive games that can also be understood under the framework of gamification are Blast Theory's *Can You See Me Now?* (CYSMN; 2001) and *Rider Spoke* (2007), as described above. CYSMN explores the interaction between online participants and their on-site counterparts when completing missions together, while *Rider Spoke* focuses on inviting participants to navigate public space while also generating an installation of personal stories across the city. *Chain Reaction* closely resembles this body of work. It is a hybrid form of game and performance that seeks to engage participants in massive collaborative events through a combination of gameplay, media and performance in public spaces. Projects like these blur the lines between play and performance, game and art.

An example that draws on gamification and is directly influenced by the SI concept of derivé and Yoko Ono's game language of instructions is *Serendipitor* (Shepard 2010), a work that can also be categorised under the umbrella concept of Locative Media Art—art projects that use global positioning systems (GPS). *Serendipitor* is an alternative navigation application that helps participants find something by looking for something else; this coincides with the meaning of 'serendipity', as defined by the *Oxford English Dictionary* as 'the occurrence and development of events by chance in a happy or beneficial way' (Oxford Dictionaries 2014c). *Serendipitor* helps users experience serendipitous encounters through the use of an application that frames the encounters for them. As described on the artist's webpage: 'A participant enters an origin and a destination, and the app maps a route between the two. As you navigate your route, suggestions for possible actions to take at a given location appear within step-by-step directions designed to introduce small

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slippages and minor displacements within an otherwise optimized and efficient route'.[15] Here, we see how digital media are used as tools to problematise public space, as they present the user with things that do not quite fit—mismatches between the digital representation of space and the physical place where the user is located that must be negotiated.

The preservation of New Media Art has called into question the conventional strategies by which cultural artefacts are stored and re-displayed. This is mainly due to the ephemerality of media formats that makes preservation difficult. As a result of this concern with the preservation of multimedia formats, New Media Art has brought new possibilities for documentation and archiving to hybrid works that mix living ephemeral artforms with technology.[16] An example of an alternative way of archiving an artwork is found in *The Giver of Names* (Rokeby 1991), an interactive installation documented by Jones and Muller in 2007. They composed the documentation by gathering the author's intentions and the participants' experiences of the work through interviews, together with the technical details and hardware. Their approach was based on the idea that documentation should 'provide multiple perspectives of the work, as well as multiple layers of information, held together with – but not sublimated to – the idea of a unified ideal' (Jones and Muller 2008, 419).

Another example is the documentation of *Rider Spoke* (2007), which followed a similar principle of integrating multiple perspectives, including interviews with the artists, technologists, ethnographers and participants, as well as user-generated content and metadata (Chamberlain et al. 2010; Giannachi et al. 2010; Giannachi et al. 2012).

The implication of this is a new archival logic wherein documentation is expected to provide multiple perspectives on the work and related participants are asked to contribute to the documentation of artworks.

This archival logic of New Media Art applies to *Chain Reaction*; I demonstrate this in article 3, in which I examine alternative ways of documenting a performance that is participatory, mobile and distributed. Because of these characteristics, *Chain Reaction* forced the creation of alternative capture strategies

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[15] The application can be downloaded here: http://serendipitor.net/.

[16] Here, the concept of *variable media* is central, and it refers to the possibility of capturing the experience of works by artists and related participants independently of the physical material and equipment (Depocas, Ippolito, and Jones 2003).

outside of the theatre house, as well as the creation of archives in which participants were included as contributors, not only because they were asked, but also because they carried out part of the documentation.

To summarise, in this section I have drawn a historical contextualisation of art forms that preceded *Chain Reaction*, and which can help us understand its main characteristics. I will now proceed to a presentation of *Chain Reaction*, which I hope will create a clear ground of the object of study for the rest of the thesis.

2.3 Chain Reaction

Inspired by Theatresports, in which the frame of a game is adapted for the purpose of making theatre, *Chain Reaction* makes use of a game—a *gymkhana*—to support the creation of theatre. It has a set performance system—or a game model—that structures the performance, as shown in the diagram below.
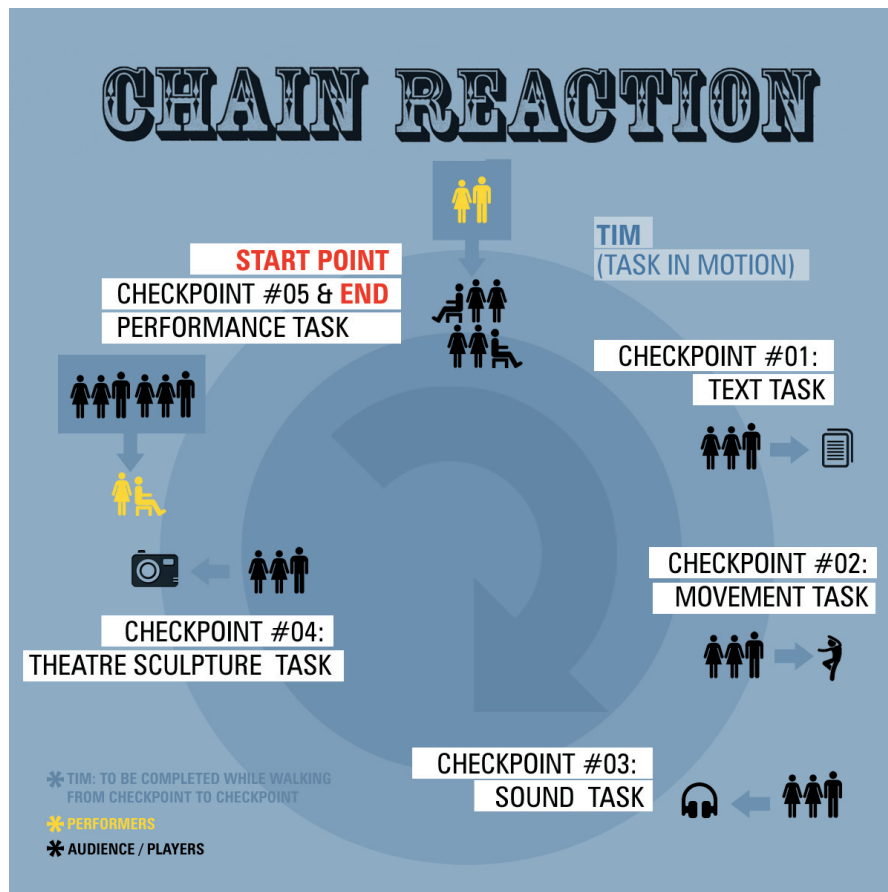
Figure 6: Structural model of *Chain Reaction.*

The performance goes as follows: Players meet in a specific place in the open (a park or a plaza) or inside a venue (such as a theatre), where a narrative is delivered by actors who explain the game rules and hand out maps and mobile phones to the players (in the model, this occurs at the 'Start/End Point', marked in red). On the map, there are checkpoints marked. Players must travel in groups (of two to four players) and visit all of the checkpoints. At each checkpoint, an actor delivers a task that players must complete. Completing the tasks generates and accumulates pieces of artistic material that are to be used in the final performance task: in checkpoint #1, players create a piece of text; in #2, players choreograph a sequence of movement (see Figure 7); in #3, players invent a pattern of sound; and in checkpoint #4 players devise a theatre sculpture.

Figure 7: A team completes checkpoint #2 in Trondheim, the sequence of movement task. They are instructed to locate themselves at opposing sides of the bridge and slowly approach each other while mirroring each other's movements. Each player is given a headset to listen to the same song to help them block outside noise, synchronise the rhythm and set the mood for the sequence of movement. Photography by Lara Sánchez Coterón.

In addition to the regular checkpoints, there is an extra checkpoint named # Task in Motion (see 'TIM' in the upper right corner of the structural model), which instructs players to carry out an activity while walking between the checkpoints (see Figure 8). At the last checkpoint (#5, which is also the 'Start/End Point'), players are instructed

to devise a short performance piece out of the materials they have collected. Each group performs its piece for the rest of the participants—other players and the actors—and there is a final, informal vote to decide on the 'best' show, whereby the 'winners' gain a symbolic trophy and the others get a badge as a keepsake of the event. Once the event is over, players are encouraged to document their experiences through text, pictures and videos on social media platforms such as Facebook and/or SFZero.[17]

Figure 8: A team completes # Task in Motion (TIM) in Trondheim; the digital drawing indicates a good location for landing a spaceship. Players are instructed to use an application called Everytrail to track their movements in the city (and upload the walk onto a map) and, in so doing, make a drawing that can be seen by aliens in outer space to indicate where they can land their spaceships. Photography by Lara Sánchez Coterón.

While this core game structure remains the same in every iteration of *Chain Reaction*, other elements must be adapted to each new cultural context, such as the fictional story, the tasks to be performed and the locations.

The structural design of *Chain Reaction* is indebted to several of the art forms discussed above. It has elements from improvisation and Theatresports, in that it applies an acting format that is close to dramatic playing and is also suitable for non-professional actors. In this sense, *Chain Reaction* can be understood as an intensive, one-time improvisation 'workshop' wherein participants first play games to loosen up and to connect to important material that they feel connected with, in order to then be able to play/perform.

The structure also has elements of Happenings and Fluxus. *Chain Reaction* can be understood as a Happening in the large sense. It is an event in which the

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[17] SFZero is an online collaborative game platform based in the San Francisco Bay area. Members earn points by completing game missions in the real world, then documenting their actions online. Documentation not only serves as proof of the players' activities in the real world but also has game value in itself: the better the documentation, the more points it scores in the SFZero game world. See www.sf0.org.

audience is invited to play, it requires a large orchestrational apparatus, it is complex and elaborate and it takes place outside of the theatre institution. The tasks in *Chain Reaction* can be understood as a succession of event scores, or meditative mini-games, resembling Yoko Ono's instruction pieces.

However, how can *Chain Reaction*—following the examples of Happenings and Fluxus—succeed in creating a feeling of free play and experimentation in its participants while using the frame of a goal-orientated game? *Chain Reaction* connects here with current experimental game practices that see 'gaming' as having the potential to facilitate experimentation even by connecting to the spirit of competition. The hypothesis is that it is precisely the connection to competitiveness that releases performance anxiety in the participants. Game scholar Ragnhild Tronstad argued, when analysing *Chain Reaction*, that 'the use of game mechanics liberates players from personal responsibility and allows them to overcome their own boundaries. The game frame helps players to "forget themselves" and overcome self-censorship' (2012, 225).

2.3.1 Story Frames

Chain Reaction has been publicly orchestrated three times: once on 17 October 2009 in Berkeley, California, and twice on 27–28 May 2011 in Trondheim, Norway. The story settings were different in the two locations. In Berkeley, the story setting had a satirical, futuristic narrative that connected with actual, serious political and social struggles related to the recent budget cuts and increase in tuition fees at the University of California. This turmoil had caused demonstrations and protests among students and faculty members. According to the game's story (which was set in the future), by 2020, Berkeley had been successfully privatised down to the very last brick. The university only accepted students who were guaranteed to contribute directly to the global economy—that is, students of business, economics, engineering and law. Degrees in history, literature and journalism had disappeared. The university had become a corporation. The player's role was to help the corporation reach its goal of total privatisation by going around the city and conducting research on things, people or activities that could still be co-opted. Players were hired by UCB—*University Corporation Berkeley*—to present a report in the form of a performance, with the findings of their research and a recommendation to the corporation on how to proceed. The performance pieces were absurd and satirical proposals for co-opting

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human life, with titles such as 'How to Talk to a Young Revolutionary', 'Corporate Flowers' and 'Domination Science' (see Figure 9).

Figure 9: A team completes checkpoint #5 in Berkeley, the final performance. The photo depicts a moment during the winning performance titled 'How to Talk to a Young Revolutionary', by Avidd Opolis and David Fine. Photography: Benjamin Kiesewetter.

In Trondheim, the story setting had a humorous, science fiction narrative set in the present time, in which players—characterised as aliens disguised as humans—were preparing for an invasion. In this expedition, players were sent out into the city to gather data that would help aliens successfully invade Earth, finding out what was essentially human so that it could be co-opted for alien purposes. Their findings would also be presented to the other participants in the form of a performance, in which they would have to use the materials collected from throughout the city.

Why did the narratives differ so vastly, from the socially and politically engaged narrative in Berkeley to the more playful narrative of alien invasion in Trondheim? In Berkeley, we developed the fictional story according to the topic of interest to the Berkeley community in that specific time and cultural context; in Trondheim, we did not follow such a procedure. In Berkeley, the recent budget cuts at the university and the consequences these would bring to education and society at large were being discussed in different forums. The University of California at Berkeley has a history of activism and a tradition of engagement that traces back to

the Free Speech movement in 1964, when the first campus student movements made headlines all over the world. This means that, in Berkeley, politics and social movements are topics of interest that activate the population into political action. In addition to Berkeley citizens' active engagement in sociopolitical matters, it is also important to note that, in the weeks prior to *Chain Reaction*, there had been several events at which students were engaged in different performance interventions, creatively tackling different aspects of the budget cuts. The collective UC Movement for Efficient Privatization (UCMeP), formed by a group of graduate students at the Department of Theater, Dance and Performance Studies, staged a satiric performance in Sprawl Plaza in which they appeared as businessmen privatising the main sites of the Berkeley campus, selling away the Berkeley Tower, the museum and the Free Speech event, itself (which was ironically sold for $1).[18] *Chain Reaction* appeared in this context as yet another creative intervention in the sociopolitical struggle, a playful way to relate to the economic crisis. In this sense, it could be argued that we used the sociopolitical struggle as a way to attract audiences into the performance, as opposed to how it is normally done—that is, by using the theatre to draw attention to sociopolitical struggle.

In Trondheim, where the political struggle was not such a 'hot' topic, we decided to go for a more fantastic fictional story set entirely in the realm of an imaginative universe. Even though this narrative might seem to have been very different from the Berkeley story, it had several similarities. For instance, the reason given for participants to intervene in public space was similar: they were researchers doing ethnographic work—among humans in Trondheim and among the parts of society that had not yet been co-opted by corporation in Berkeley. The objective of the participants was to capture that which is essentially human, that which cannot be easily co-opted. In the Trondheim case, aliens were both hiring the participants and colonising the Earth, while, in the Berkeley case, the university corporation was hiring the participants and privatising (a form of colonising) society. Seen in this way, it becomes clear that the narratives were thematically the same, focusing on capitalism and its mechanisms of control. Recurring questions in *Chain Reaction*— which were explicit in Berkeley and more hidden under the science fiction narrative in Trondheim—were: What are the strategies of co-option being used by corporations,

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[18] For more information on UCMeP's actions go to https://ucmep.wordpress.com/.

banks and the State to control society? How can we contest capitalism if it is both the enemy and the sponsor? Here, *Chain Reaction* drew on inspiration from forms of theatre for social change, such as community theatre and the Theatre of the Oppressed. In the same way that these theatre forms for social change sought to emphasise the dramatic potential of local and personal stories, *Chain Reaction* aimed at bringing forward the dramatic potential of the local environment and the stories embedded in it.

The different themes did not imply a change in the design of the event, which remained structurally similar in both Berkeley and Trondheim. However, the different narratives did have an impact on the meanings produced. This can be seen in the titles of the resulting mini-performances. The Berkeley performances articulated the sociopolitical interest, as suggested by titles such as 'How to Talk to a Young Revolutionary', 'Corporate Flowers' and 'Domination Science'. The Trondheim performances lacked this political engagement and revolved around more abstract topics, such as location (in the performances 'Guess Where' and 'Agnes and Karl in a Very Good Landing Spot'), romance ('I Had a Heart') or more abstract themes ('Alt I Orden', 'The Lost Ones' and 'Zezinho'). Some did have a political focus, while others dismissed the political entirely and focused on aesthetic aspects of public space without trying to send a message. While the Berkeley performances posed a critical stance to co-option, the Trondheim performances were more accommodative. Both iterations offered participants a sense of what it feels like to express oneself through performance and theatre, though one was more socially invested than the other.

2.3.2 The Tasks

Echoing Yoko Ono's instruction pieces, the tasks to be completed in *Chain Reaction*'s checkpoints used the frame and rhetoric of games (imposing rules and limitations) to stir participants' imaginations.

The tasks in the Berkeley and Trondheim iterations had a similar structure, and the changes that were made followed two premises: adapting the tasks to the cultural context and making a more integral use of technology for creative expression. The text task (#1) illustrates our adaptation of a task to the cultural context. In Berkeley, we had a checkpoint at which players were required to ask someone over 40 to sing them their favourite song. However, after playtesting this task in Trondheim, it

became clear that Norwegian citizens were not as comfortable singing in public as American citizens were, which made us omit this task in Trondheim.

In Trondheim, there was an increased focus on technology, due to a need to re-direct the event to properly answer the initial research questions;[19] this made us re-design the tasks so they would use technology to foster creative expression in the players, while simultaneously connecting to the narrative. Thus, this orchestration did, to a greater extent, approach New Media Art works in which digital media are employed to engage users in interactive processes wherein they can display their creativity by creating digital content. In article 2, I describe the different ways in which technology was implemented in Trondheim and discuss what was gained by this implementation. One example (among others in article 2) is our use of technology for creative expression in the Task in Motion (TIM). In Berkeley, the TIM required players to get hold of something for free as they traversed the city from checkpoint to checkpoint, and to bring it to the end (to be used as a prop in the final performance). This task was designed to make players explore the objects of the city that did or did not cost anything.

In Trondheim, we changed this task and instructed players to use a mobile phone to create a drawing in space that would be used to mark the best landing spot for spaceships when invading the Earth. This task was connected to the narrative, and it was designed to add a level of playfulness while they traversed the city from checkpoint to checkpoint. Participants were asked to bring the drawing to the end and to use it as a background projection in the final performance.

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[19] The rationale behind repeating the experiment is explained in article 1.

Figure 10: A player on the left side of the picture (see his arm and phone) audio records a stranger in a shoe store singing his favourite song, 'I Got Love for You, Baby'. Screenshot from video recorded by player 'Spidere'.
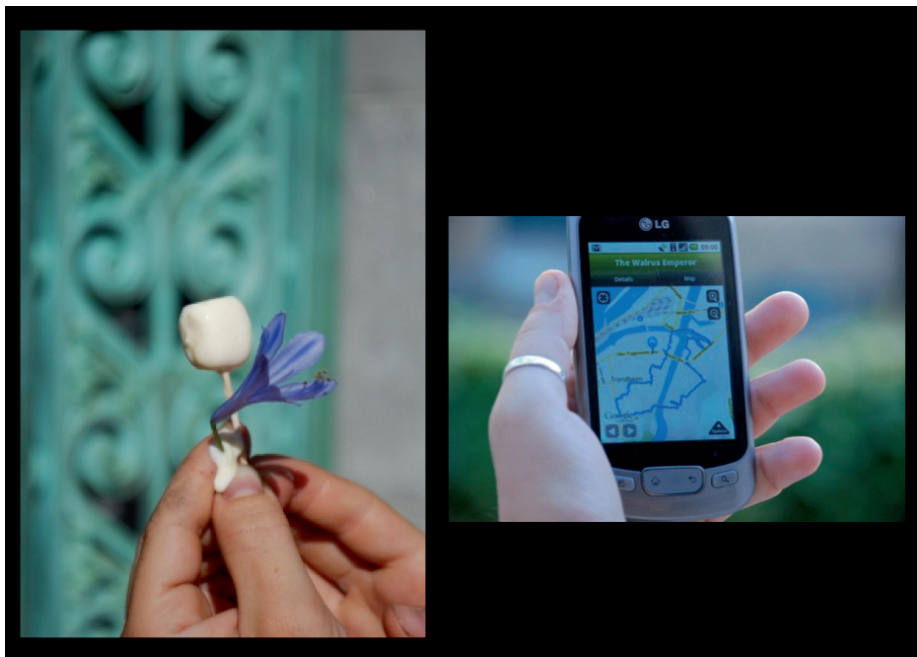
Figure 11: On the left, a flower and an ice cream sample, the two items that players managed to get for free in the # TIM in Berkeley. On the right, a screenshot of the drawing that players made using the mobile phone in the # TIM in Trondheim.

The tasks related to the fictional stories through integration of the instructions as part of the narrative. For example, when explaining the theatre sculpture task in Berkeley, the actor on site would contextualise the task by saying that the corporation wanted to make sure all professions, or styles of living, were co-opted and monetised. The theatre exercise was designed to identify the chore activities of certain professions, and to bring forward the skills or attitudes to be co-opted (in case they had not yet been co-opted). In Trondheim, the exercise was introduced through the aliens' need to understand family dynamics in Trondheim, in order to gain access to the private domain and, in this way, design a colonisation plan that accounted for not only city life, but also domestic life (which would be more effective). This means that the tasks were structurally the same, but their context was adapted to the fictional story.

TASKS	IN BERKELEY	IN TRONDHEIM
Task in Motion (TIM)	**Something for free:** Bring something with you to the final checkpoint that you can legally get without paying for it.	**Digital drawing:** Draw a sign in space while walking from checkpoint to checkpoint using a mobile phone and the application Every Trail. The sign should indicate a good spot to land the spaceships. • You may pause/start the application when you need.
#1 Text	Find a stranger and get her to say the word 'corporation' in a sentence. Note the sentence down and learn it (you will use it later). • It must be someone who is not in the game. • You may not tell the person you are playing a game.	Find a stranger and get her to say the word 'fantasy' in a sentence. Note the sentence down and learn it (you will use it later). • It must be someone who is not in the game. • You may not tell the person you are playing a game.

#2 Movement/Mirroring	Choose an object from nature, or a mechanical object, or a person in space. Having the object or person as inspiration, make a ten second movement piece in which there is a jump, a spin and a fall. • All group members must participate. • Group members may not perform the same actions simultaneously. • There must be interaction between group members.	Locate yourselves on an opposing side of a public square, fifty meters away from each other. Put on a headset and press play to listen to a common track. Move towards each other, mirroring each other in quite slow motion while listening to the music until you touch. Once it is over, pick a ten second sequence of movement. Rehearse it and memorise it, to be used at the final performance.
#3 Theatre	Choose a person that interests you on the street or a person that works inside a store and impersonate him/her: become that person. Make an imitation, a theatre sculpture that lasts fifteen seconds and does not repeat the same action over and over. Repeat it until you are satisfied with it.	Pick a bypasser on the street, study her movements and then, in groups, impersonate them and create three different family pictures and their corresponding transitions until creating a short sequence of movement in which the story of these family relations is made explicit.
#4 Music	Find a stranger over forty years old to sing you his/her favourite song. Note it down and learn it. The song must be fifteen seconds long. • It must be someone who is not in the game. • You may not tell the person you are playing a game.	Make a music composition by using the sounds you hear in the environment around you. *(NB: this task was playtested but was not included in the final performance due to time restrictions.)*
#5 Final Performance	**TV commercial:** Join another group and, together, make a TV commercial in which you show your findings and: a) demonstrate how all the	**Intel to be sent to outer space:** Join another group and, together, send a message to your fellow aliens in outer space informing on conditions

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	materials you have gathered are a threat to the corporation; or b) demonstrate how the corporation can benefit from this information and turn it into a product. • You must use all the materials gathered in all checkpoints by both groups. • You may add elements. • The TV commercial must last one minute. • Everyone must participate in the TV commercial, but not to the same degree.	for invading the Earth. • You must use all the materials gathered in all checkpoints by both groups. • You may add elements. • The broadcast must last one minute. • Everyone must participate in the broadcast, but not to the same degree.

Once a group had completed a task, they were asked to show the performance to the orchestrator, who would sign their maps as a way of validating the task. In this way, they were allowed to continue to the next checkpoint. But how were the tasks validated, and according to what criteria?

The criteria were decided during the two playtests that we organised prior to the public orchestration in Berkeley. At first we applied a criterion based on creativity—that is, a validation of the tasks according to how it was solved in fun, ingenious, unconventional ways. We were here trying to apply an open-ended, alternative criterion to measure quality by focusing on the interactive process of participants rather than the reception of the work, echoing Relational Art and its valuation of intersubjectivity over art as an object. *Chain Reaction* is part of a lineage of work deemed 'works-in-progress', 'unfinished', 'amateurish' and 'relational'. The artistic conventions for quality that are normally applied in the traditional arts did not quite fit these practices, because our participants were non-professionals; therefore, application of an artistic criterion for quality used by professional artists would be

unfair.[20] Just as Relational Art advocates an analysis of art according to social criteria, so *Chain Reaction* aimed at devising such a criteria for the tasks.

However, even though we wanted to value process and not set clear rules for validating the tasks, we found that not setting up a clear and accountable criterion was counterproductive for the players, who reported feeling paralysed and stressed when being told 'to be creative', and craved a criterion (or a framework) to measure their actions. We needed to determine more accountable rules that players could use as a framework for deciding how to proceed with a task, and that orchestrators could use as the basis for their decisions. This illustrates the tensions present when approaching work that values social relations and interactions. We then devised a compositional criterion, which stipulated that the completed task ought to contain all the elements that were asked for in the instructions, regardless of how the elements were put together. For example, a task with straightforward criteria for successful completion was the movement task (#2) in Berkeley, in which players were instructed to make a ten-second movement with a spin, a jump and a fall. Players could have longer sequences of movement that included other actions, but, at minimum, they had to have these four elements. The criteria based on having a minimum of elements in the composition was useful because it had a sense of accountability that could be used by all orchestrators, and it also allowed us to avoid aesthetic criteria for quality based on good/bad technique, execution, levels of meaning and so forth. We found a middle ground—a criterion that gave the illusion of accountability through the rhetoric of game, and that did not value quality, but process. As long as the task was completed and contained the minimum elements, it would be 'approved' by the orchestrators.

In the final performance task, we aimed at using the same criterion—a minimum of elements in the composition. Once all the final performances were staged, there was a final vote among players and actors to decide on the best show. The best show would be staged again, recorded and, in Berkeley, sent to the officials

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[20] This is part of a larger debate that aims at establishing alternative criteria for quality in the new performative aesthetic that *Chain Reaction* is a part of. Already early in the twentieth century, John Dewey (1934) proposed an understanding of art as an experience, rather than an object. Erika Fischer-Lichte (2008) proposed presence and its transformative power. Barbro Rønning (1990) proposed, when analysing people's theatre, a criterion based on 'collaboration' and 'quality of dialogue'. A very concrete proposal was made by Langsted (2003), with the 'wish branch model' that measures factors such as 'will', 'ability' and 'purpose'. The theoretical sources coming from Relational Art have argued for a criterion based on 'social' criteria. However, to my knowledge, no proposal has yet materialised, aside from that of Bishop (2012), who reacted against this and argued for an aesthetic criterion for social works based on the 'antagonism' they produce in participants: criticality and resistance to intelligibility.

at the corporation to be adopted. In the Trondheim case, the performance would be sent out to space. In order to decide on the best show, we communicated the criterion of the performance containing all of the required elements to the audience before the voting started. However, it is hard to determine the extent to which players voted according to our criterion or according to other factors, such as fun, execution or personal taste.

Figure 12: A team during the final performances in Trondheim. Here we see a moment during the performance entitled 'Karl and Agnes in a Very Good Landing Spot'. Photography: Elena Pérez.

2.3.3 The Locations

Chain Reaction took place entirely in public space (in Berkeley), or partly in public space and partly inside a venue (in Trondheim). In Trondheim, the venue was the city's experimental theatre house, Teaterhuset Avantgarden. Locations for the tasks had to be carefully chosen to enhance the task's meditative qualities or to problematise the space.

Echoing the way in which site-specific performance is generated from a site and discovered through performance, *Chain Reaction* incorporated the layers of the public sites where the tasks were completed. As we saw above in the description of the tasks, tasks asked players, sometimes explicitly, to observe their surroundings and

convey these surroundings through an art form (e.g., a theatre sculpture of passers-by or a sequence of movement inspired by the surroundings). In this way, the resulting mini-performances were created in and from the sites, and the site's qualities were consequently captured in them. Later, when players were asked to combine all of the materials they had collected throughout the city in a longer performance piece, these resulting performances created a more direct link between the performance and the public space from which they were collected.

The tasks were spread throughout the cities, with a maximum distance of 300 metres between them. Even though the walking distances were relatively easily for players to cover, we designed the TIM to keep players engaged at all times. This also provided the possibility for participants to examine city space while in motion, in some kind of 'drifting mode' that recalls the drifting generated by Mark Shepard's *Serendipitor*. TIM in Berkeley made players playfully explore the objects in the city, while TIM in Trondheim made players playfully explore the city's structure through media. Both *Chain Reaction* and *Serendipitor* aimed at bringing forward the structural possibilities of the city for creative expression.

Some of the tasks asked players to collect materials: TIM in Berkeley asked players to obtain an item from the city that they could get for free; TIM Trondheim asked players to draw on a digital map a certain route; and task #1 asked players to collect a piece of text generated out of an interaction with a stranger. This aim of collecting materials from—or generated in interaction with—the city space is reminiscent of Kaprow's advocacy of using materials of everyday life, such as melting ice cream or a digital drawing of a spiral, as legitimate materials for art-making.

2.3.4 Documentation

In *Chain Reaction*, documentation was part of the aesthetic event. This means that documentation was not only carried out by the authors as part of the creation of the archive or research of the event, but also partly carried out by players.

The documentation was carried out differently in Berkeley and in Trondheim. In Berkeley, we started with a conventional approach to documentation and hired two camera men to capture the whole event. However, we realised that this approach fell short, as there were always parts of the event that escaped documentation. As a result of different decisions and choices, Berkeley players documented the event in a

collaborative game platform called SFZero, to which they uploaded multimedia stories that captured their subjective experiences.

In Trondheim, we took a different approach, which consisted of handing out mobile phones to the groups of players and asking them to document their journeys throughout the city. As the groups had to return the phones, we ensured access to players' documentation without camera men having to follow them. This approach resulted in a lot of documentation of the players' activities in public space. However, this documentation was not sorted and contextualised by the players, themselves, which made us realise that the interesting aspect of documentation is not the accumulation of pictures, but the contextualisation and presentation of the documentation as a meaningful whole—a story.

In article 3, I thoroughly describe the documentation process and discuss the possibilities of integrating documentation as an extension of the aesthetic event through which players mediate and gain a deeper or more nuanced understanding of the event via its documentation.

The way in which the documentation of *Chain Reaction* allowed players to actively construct their own stories after participating was inspired by the new archival logic introduced in New Media Art and its aim of relying on the sharing of stories and individual experiences by all related participants to construct the archive. With *Chain Reaction*, we learned that one could go a step forward and also use the stories of participants to create artwork—not only for archival purposes.

2.3.5 Why Audience Activation?

In *Chain Reaction*, participants were invited into different participatory modes, including spectator, player, theatrical actor and documentalist. Why was activation of participants sought at all times?

In order to answer this question, I would like to recall the words of Augusto Boal when reflecting upon his intentions with the Theatre of the Oppressed. He said: 'I, Augusto Boal, want the Spectator to take the role of the Actor and invade the Character and the stage. I want him to occupy his own Space and offer solutions' (2008, xxi).

Like Boal, we wanted to open the stage—both the theatre stage and the expanded stages of the city—for the spectator. We wanted the spectator to offer solutions related to the story frame—but more specifically to explore her ideas of

aesthetic forms through play—and, finally, to offer his perspective of what theatre and play is and can be.

Inspired by neo avant-garde forms, we wanted to make people play—and to call them players—as done in improvisational forms to relieve participants from the expectations attached to 'acting' in the theatrical sense.

However, we also wanted to have clear, delimited spaces for observation and reflection. This was designed and incorporated in the structure of *Chain Reaction*, in which spaces for action and reflection alternated. We divided the audience into groups, allowing them moments to stop and observe other groups' performances. For example, as groups wore a prop that separated them from ordinary passers-by (a colour band in Berkeley and a moustache in Trondheim), they would recognise each other performing and completing tasks in the city, and could evaluate how they were advancing in the game. Similarly, when groups observed other groups' final performances, they had time to reflect on the other groups' ways of solving the tasks. This interplay between action and reflection echoes Boal's Spect-Actors, who are able to achieve a critical distance through both acting and reflecting. This is even more so in the case of the documentalists, who compose a media story after the event is over.

Chapter 3: Methodology

In the following, I present the methodological approach of this PhD project and discuss the methods applied. The methodology was a combination of traditional hermeneutic methods of interpretation and reflection, together with academic forms of practical inquiry, in which research was conducted through the development and analysis of performance. This methodology involved a diverse hermeneutical process, including literary text analyses as well as traditional methods for humanistic text inquiry within the field of performance and media.

3.1 Chronology of the Project

I started researching when I first became a self-financed PhD student in the Department of Media and Communication at the University of Oslo in 2008. During that year, I mapped the field in which digital media converges with performance, and proposed the following three categories: multimedia theatre, telematic performance and pervasive theatre. These three categories helped me represent the complex and variegated fields of practice while simultaneously moving across a vast variety of work in a comprehensive way. Thus, the categories were fixed to the extent that they served a theoretical purpose, but flexible and inclusive in a practical sense. To construct such a categorisation, I collected performance works from different Western artists from the last twenty years, particularly from the United States, Canada, Europe and Australia. The collection of artworks followed two premises: First, the Internet rose as domestic tool in the 1990s, which also coincides with the years in which digital media started to be used by the everyday person in ordinary activities. Second, the use of digital media for creative expression seems to occur mostly in the Western world, as other parts of the world (with exceptions such as Korea and Japan) do not often have access to this type of technology or the necessary technological

infrastructure.[21] This pilot study became the basis for a project proposal that, in 2009, was awarded a four-year fully funded scholarship at the Norwegian University of Science and Technology (NTNU) in Trondheim, in the Department of Art and Media Studies.

The task described in the project proposal was to investigate the ways in which digital media are used in performance. The research was framed as a production-based study that would examine the strategies that practitioners use to create technologically enhanced performances in the three categories presented.

In 2009, while still affiliated with the University of Oslo, I started a one-year stay as a visiting scholar in the Department of Theater, Dance and Performance Studies at the University of California at Berkeley. In Berkeley, I completed most of my coursework and also collaborated in several performances and artistic projects organised by fellow graduate students as actor, dancer and orchestrator. The practice of developing one's own artistic work in parallel with other research duties was common among PhD students, and understood as one of the 'unwritten rules' of being a productive graduate student. Becoming part of this network of collaboration with Berkeley graduate students helped me create my own performance experiment, as the other students helped me develop the concept and stage the event of *Chain Reaction* (2009), as volunteer actors and orchestrators. During that year, I also gained experience in video production in Scott Wallis's multimedia adaptation of Gertrude Stein's *What Happened?*, which was staged in Berkeley; I participated in the dance experiments carried out in the teleimmersion laboratory at the same university, sponsored by dance professor Lisa Wymore; and I devised my own piece of pervasive performance, named *Chain Reaction*, which was publicly orchestrated in October 2009.

The practical insights gathered from developing the performance project *Chain Reaction* helped me identify some of the theatrical conventions that are most radically challenged by the inclusion of digital media. For example, I came to understand how the use of media may generate participation and therefore challenge the convention of audience behaviour in performance. These insights directed me

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[21] The Arab Spring protests (2010 to the present) have shown the impact of digital and social media on political activism and social movements in the Middle East. However, the application of digital media has not yet happened on a cultural level, or, if it has, it has not yet been made visible, which leaves this part of the world outside of this study for the time being.

towards examining similar projects, such as the case study of *Rider Spoke* (Blast Theory 2007). The experience I gained from participating in the teleimmersion laboratory at Berkeley allowed me to gain not only a practical understanding of the aesthetic of the telematic, but also insight into the social and political contexts from which this practice emerges. I used this as a starting point in article 5, in which I make a comparative analysis of two telematic performances. Working as a video producer in Scott Wallis's production gave me insight into the way in which the theatre ensemble is undergoing rearrangement as new elements are incorporated in the performance, requiring a new set of skills from performance professionals; I discuss this in chapter 6, in the section: 'From Scenography to Digital Scenography'.

After the Berkeley stay, I became the assistant of the research group PerFormativity[22], based at NTNU, and co-founded a working group called Methodology Laboratory (MetLab)[23], which explored the possibilities and challenges of practice-based models for conducting research in the arts. I used the MetLab network as a frame for repeating the *Chain Reaction* experiment in Trondheim, a year and a half after the first orchestration in Berkeley. The Berkeley work had accomplished several goals, such as providing a successful performance model for audience participation and generating insights about audience-based documentation. However, the use of digital media during the performance event, itself, needed to be adjusted to better meet the research question. It was around this time that I started writing articles 2 and 3, which use *Chain Reaction* as their main case study, along with an additional article that reflects on the methodology (article 1). This practical work allowed me to identify emergent areas for development in pervasive performance, such as how media may allow the spectator to become both a documentalist and a participant in the creation of participant-generated archives, as discussed in article 3. If it hadn't been for my practical involvement, I would never

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[22] The PerFormativity group was an interdisciplinary focus area (2009–2014) at the Faculty of Humanities that was created to research the role of performativity in contemporary art, communication and knowledge formation (http://www.ntnu.edu/performativity/). As part of this group, I helped organise the 'International Performativity Seminar', titled The 'Performance Turn': Implications for Academic Research and Organisation, on 12–14 April in Trondheim, Norway. http://www.ntnu.edu/performativity/international-performativity-seminar.

[23] MetLab was active for one year (2010–2011), and gathered several people interested in artistic research and practice-based research, such as Andreas Bergsland, Tone Åse, Aud Sissel Hoel, Barbro Rønning, Ellen Foyn Brun, Heli Aaltonen, Vigdis Aune, Anders S. Løvlie, Lise Hovik and Bjørn Rasmussen. http://performancemetlab.wordpress.com/.

have had access to this information, and my research challenges would have been different.

Once the practical experiment was over, I went back to looking at practices from other practitioners in literary sources. By studying the practices of a variety of artists, both established and emerging, I hoped to achieve a better foundation for my discussion of how the application of digital media challenges established conventions in contemporary performance. Although I read theoretical sources during the first two years of my studies, my engagement with theory started more intensively once my practical work was finished in 2011. In the overall research project, this means that, of the four years that this research lasted, I dedicated one year to the practical project (one semester in Berkeley and one semester in Trondheim) and over two years to reflection and interpretation (one year was spent teaching at NTNU). Examining case studies created by others and studying relevant case theory together with the findings of my own practice helped me answer the research questions.

This was a theoretical project studying a variety of cases using conventional and standard methods of reflection and interpretation (hermeneutics), with the exception that one of the case studies was developed by myself through the creation of a performance (applying a methodological framework of research through practice in performance). The steering objective of my practical work was to produce theoretical insight, first and foremost, and not to develop a performance genre (although I did develop several performance events that may or may not have had such an impact). The eventual artistic result of the inclusion of several performance events in the research process may be regarded as an added bonus to the PhD work.

3.2 Hermeneutic Approach

This study applied a contemporary interpretation of the hermeneutical and phenomenological philosophical traditions. Hans Georg Gadamer's well-known theory describes the act of understanding a text (or a phenomenon, for that matter) as a circular movement, in which the reader moves from an anticipation or pre-understanding (pre-judgement) towards a greater understanding through 'a dialogue' with the text or phenomena in which the readers' pre-understanding of the whole precedes an understanding of the parts; this again challenges and revises the understanding of the whole, and so on in what is known as the *hermeneutic circle*.

The hermeneutic circle describes what is probably the most central practice in humanist scholarship: trying to understand and interpret a text (or phenomenon).

In *The Model of the Text: Meaningful Action Considered as Text* (1973), Paul Ricoeur aimed at expanding hermeneutics beyond written documents in culture by combining the resources and insights of hermeneutics with phenomenology. That is, he linked the understanding of phenomena to the understanding of self and being, relating the interpretative model of the hermeneutic circle with subjective perception and experience. In line with this double focus, Ricoeur came to see 'the text' as a paradigm for addressing important historical, ethical and philosophical problems. This enabled him, among other things, to consider human action as a meaningful whole that is structured as a text.

Ricoeur separated himself from 'the idea of an absolute text' (96). He advocated application of the hermeneutic circle to the interpretation of things other than literary texts—that is, other symbolic forms and human actions. This expanded notion of text from Ricoeur and other poststructuralist philosophers, such as Jacques Derrida, Roland Barthes, Umberto Eco and Michel Foucault, is crucial for applying the hermeneutic circle to the cultural practices of human and social sciences, and it was particularly relevant for this study.

In the field of theatre and performance, German theorist Erika Fisher-Lichte used hermeneutics in combination with semiotics to analyse performances in her *Semiotik des Teatres* (1992). She saw that the hermeneutic method could be helpful for performance analysis in two ways. First, the hermeneutic method affords a wide variety of interpretations. As the spectator (or researcher) comes to the theatre with her own prior knowledge, as well as preconceptions and prejudices that form the basis of her 'horizon of understanding', she builds her interpretation by understanding small elements in the performance, which, in total, constitute a larger one—the performance as a whole. The process of interpretation is thus a circular one that starts with a set of preconceptions of the whole, which are then revised according to understandings of smaller parts, which again lead to a new understanding of the whole (and so on, in a circular movement). The second way the hermeneutic method was useful to my performance analysis was in its legitimation of the researcher's experience of a performance as the basis of performance analysis. In other words, the method asserts that the researcher must decide what elements are more relevant to examine than are others in the theatrical event. According to Swedish theatre theorists

Jacqueline Martin and Wilmar Sauter (1995), the benefit of using the hermeneutic method is that 'it frees semiotic analysis from the urge of a "complete" reference to all elements—significant as well as irrelevant that is common practice in conventional semiotic analysis' (62). In their view, hermeneutics legitimates the validity of the researcher's own decisions and categorisations based on her own experience (which elements are chosen as dominant—constitutive of the performance—and which elements are considered redundant, side-tracking the performance). The drawback of the hermeneutic method, in their view, is that it can be used simply 'to argue for the plausibility of the approach' (62).

In my PhD project, I applied hermeneutical thinking not only in the performance analysis of digital performances, but also as an integrated part of an added practice-based research methodology.

A first level of hermeneutic analysis was used to understand performances that made use of different types of digital media. The analysis of these performances resulted in insights that are presented in the six articles included in the second part of this thesis. In each of the articles, I focus on a different aspect that I found to be challenged by the use of digital media. That is, a performance element that was found to change significantly as digital media were incorporated, such as participation (article 2), performance documentation (article 3) and space (article 6). The decision to focus on these elements—and not others—came partly from the practical, embodied experience of creating performance experiments, partly from attending and analysing other performances and partly from studying theoretical, analytical and descriptive literary sources. In this process, I prioritised and focused my analysis on the elements that I found to be 'dominant', and left aside those that seemed redundant or were thought to possibly side-track the research project. Thus, the practical work was understood as an experiential base for analysis and theory development.

The secondary sources I collected were images, recordings of performances provided by the artists or bootlegs found on the Internet (recordings of performances by spectators) and a variety of Internet sources such as reviews and theatre group webpages. These 'documents' were not only the basis for the analysis, but also helped considerably to fill in gaps of memory to construct a complete analysis.

In a second level of hermeneutic analysis, I looked across the six articles in the second part, bringing forward similarities and differences between the challenged conventions analysed there to present a synthesis in this introduction (Part I). This

means that, in a way, the reader approaches this thesis from the end, since I present at the beginning my interpretation of the whole (which I was able to interpret only after analysing the parts through the articles).

3.2.1 Practice-Based Research in the Humanities and the Arts

Practice-based research did not originate in the humanities, but in the art and design colleges and schools. However, inspired by the rise of performance studies as a university discipline fostered by Richard Schechner at the Tisch School of the Arts in New York, it soon 'moved' into the universities. Pushed by artists working within a university context during the 1960s and 1970s (and in the 1990s in Norway), it had the aim of valuing and legitimising studio work 'on the floor' as a basis for doing research.

I decided early on to base my research on pervasive performance in practical performance experiments. As has been argued by many scholars, there is a need to reconnect theory with practice in humanities research (Bolter 2003; Moulthrop 2005; Rasmussen 2014). Research into practice has led to practice-based research in the fields of art and design. Other terms that are used to describe this type of research are *practice-led*, *practice-based*, *practice as*, and *practice through* (research), the difference in terms 'suggest different foci' and different methods of conduct (Freeman 2010, 1). In the discipline of performance, researchers aim to bring forward the knowledge created 'in the studio' to demonstrate its epistemological value (Rasmussen 2014). This is also the case in the discipline of design, in which fields such as new media and game design contribute different methodological models to realise the idea of 'research by design'. In the former, we find design experiments created for research insight (Bolter 2003; Løvlie 2010; Morrison et al. 2011). In the latter, as the discipline is still a young academic endeavour, researchers are often also game designers with game development studios on the side, who write about the games they create through what they call 'research by design' (Moulthrop 2005; Pinchbeck 2010; Wilson 2012; Sánchez Coterón 2012).

Practice-based research has been the subject of book publications (Dean and Smith 2009; Biggs and Büchler 2007; Riley and Hunter 2009; Freeman 2010; Nelson 2013), journals (*JAR* and *InFormation*) and conferences (CARPA). This body of work is concerned with the benefits and challenges of the interplay between research and creative practice (and vice-versa), and advocates the idea that creative practice offers

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a kind of tacit and experiential knowledge that cannot be generated or conveyed by traditional written argumentation.

Practice-based research can be defined as research 'done through practice, using methods intrinsic to the practice (such as investigations by form and conventions), as well as through a detached and reflexive approach, utilizing methods more extrinsic to practice (such as digital documentation, interviews and notes)' (Rasmussen 2014, 22). In this methodology, research is partly done in practice and partly through reflection. Different sources propose different stages of successful practice-based investigation, but they all agree that projects must establish the research questions or inquiry; convincingly articulate a transparent set of methods to be investigated through practice; contextualize the study in its field and history; report the knowledge claims and benefit and; and, finally, to make these available for sustained and verifiable peer-review (Freeman 2010; Nelson 2013). I applied this methodology when I developed the performance experiment of *Chain Reaction*, as I went through these very same stages.

Within practice-based research, we observe a difference between research carried out by practitioners and research conducted by researchers, as in my case. The former is sometimes referred to as *artistic research*, and is conducted by trained *artists* (or art students)[24] who develop their artistic practice and incorporate a level of reflection by means of theory—as, for example, promoted by the Norwegian Artistic Research Programme.[25] The resulting art pieces are 'creative products of the critical process' that require theorisation from the artists' side (Sullivan 2009, 62). The nature of this theorisation is discussed by different scholars and institutions, but it is generally agreed that it must approach the standards of academic research (described above) relating to quality, reliability and verifiability. Freeman argued that 'the combining of a written thesis with practical work constitutes an intellectual innovation inasmuch as it attempts to combine the creative impulse with the traditional research criteria of systematic analysis, theorisation and dissemination

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[24] Henk Bogddoff argued that artists are best suited for conducting this type of research: 'Do artists have privileged access to the research domain, then? The answer is yes. Because artistic creative processes are inextricably bound up with the creative personality and with the individual, sometimes idiosyncratic gaze of the artist, research like this can be best performed "from within". Moreover, the activity at issue here is research art in practice, which implies that creating and performing are themselves part of the research process – so who else besides creators and performers would be qualified to carry them out?' (2007, 12).

[25] For more information on the programme, see http://artistic-research.no/?page_id=15&lang=en.

through documentation' (2010, 267). In this type of research, the artist evolves from *practitioner* to *practitioner-researcher*, having the skills to do art but having to acquire the skills to reflect through the theoretical means associated with academic research.[26] This is the opposite situation to the one I find myself into, as I have the skills to conduct academic research, but have to acquire the skills to 'do art'.

This type of research—artistic research—is indebted to other art practices that focus on the interplay between creation and reflection. The theatre laboratories of Peter Brook, Jerzy Grotowski and Eugenio Barba, for instance, were seen as a 'complement to the stage production', exploring theatre traditions and developing new methods for performance-making (Risum 2004, 15). The crucial point is that they developed 'scientific methods',[27] combining creation and reflection *as a benefit for stage performance*. The theoretical reflections published by these artists have been used as a 'complement' to the development of performance forms and genres, and the understanding of their own practice and related issues.

Along the same lines we find the tradition of *devised theatre*, which is also concerned with the interplay between creation and reflection as part of the creative process in the production of stage performance.[28] The role of theory here is to help

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[26] According to Biggs and Biggs and Büchner (2011) 'practitioner-researchers' are defined as 'individuals who hold practitioner values, but produce research in an academic context' (2011 p. 83).

[27] Peter Brook's early experiments at the London Amateur Dramatic Association (LAMDA) 'established the principle of *scientific research* into theatrical communication, on which all of Brook's subsequent work has been based' (Innes 1993, 129); so too did his experiments in the laboratory at the Centre for International Theatre Research (CIRT). Brook's aim to develop a universal theatre language focused on the exploration of non-semantic body language to create experience—a kind of going back to basics in search of a theatre of myth and ritual. His 'scientific research method' drew on theoretical sources—he was deeply impacted by Antonin Artaud's *The Theatre and its Double* (2010), the main ideas of which he tried to materialise in and through performance in the LAMDA experiments and, later, at the Centre for International Theatre Research (CIRT). He used and reworked classical texts, such as the Indian text *The Mahabharata* in 1985. And he also took his theatre group to other continents on field trips to Africa, the Americas and India, to search for audiences with no preconceptions of dramatic performance. In addition, he published his own ideas in *The Empty Space* (Brook 1968) and other publications. Brook's methodology combined different activities – working on the floor, studying literature, doing fieldwork, and producing theoretical outcomes. The variety of methods between action and reflection is what lead him to call it 'scientific'. Another example that moves between creation and reflection is Eugenio Barba's Odin Teatret, established the International School of Theatre Anthropology (ISTA) in 1979 to 'study the recurrent principles in the performer's scenic presence and dynamism'. It later created the Center for Theatre Laboratory Studies (CTLS) in 2003 in collaboration with Aarhus University. The collaboration between the laboratory and the university has resulted in interdisciplinary projects and courses that have extended the possibilities for using theoretical-practical resources within both institutions, contributing to developing 'artistic research' as integral part of both study programs and research methodology.

[28] In her PhD thesis, Cecile Haagensen mapped the different phases of the creative process of devising, as determined by G. Wallas, L.Vygotsky, H.Aaltonen, Mermikides and Smart, R. Mock and T. Kjølner (2014, 408–9).

clarify positions or become a source of inspiration, but the interplay between theory and practice is not problematised. The theory that is produced out of devising is, again, *about* devising, and the theoretical outcomes aim mainly at understanding the devising process (Graham and Hoggett 2012; Haagensen 2014).

By comparing practice-based research, artistic research and the theatre laboratories and devised theatre, I want to emphasise the difference evidenced in the way in which some research mainly leads to improved art and other research mainly leads to theoretical understanding. My reading of current practice-based research theory is that this approach aims to answer both ambitions. British drama scholar John Freeman (2010) proposed an approach focusing on the links between research theory and performance, emphasising the role of practice especially within the frame of PhD investigations and including both types of agents: the artists, who he called '(academic) practitioners', as well as the scholars, called '(practising) academics' (2010, ix). He argued for the method of *research through practice in performance*, a sub-variant of practice-based research. He further argued for the plausibility of the approach within the institutionary confines of the university, proposing the generation of two different products: the artistic work in the form of performance and academic research in the form of a written dissertation. He acknowledged that both processes are intrinsically different, since they are evaluated according to different parameters and need to fulfil different criteria for quality. The resulting products are then evaluated according to a different set of criteria in order to obtain the degree of PhD.

Freeman's model of research through practice in performance is closest to the methodology I used in this PhD project, an interdisciplinary study, which is partly practice-based research.

I was a researcher—*a practising academic*—at the Norwegian University of Science and Technology, where I was writing a dissertation on the impact of digital media on performance. I was a trained academic doing art inside the institution of the university, and not a trained artist doing research within the institutionary confines of an art school. I consider myself to have been a researcher in the arts who, on this particular occasion, 'put myself in the shoes' of the artist, inhabiting her social context and working according to a different set of criteria.

I am inspired, and partly using practice-based methodology, but the overall study is quite ordinary theoretical study where practice is material for analysis and theory development. During the research process, in order to obtain the PhD degree, I

tested certain hypotheses through practice in performance, regarding the possible uses of digital media in performance, and I followed the methods presented above to ensure communication between theory and practice, which resulted in theoretical outcomes other than reflections of my own practice. The challenge for me was to enter the field of practice, a field in which I had notions—I had occasionally engaged in performance practices, however never professionally or trained as such—but in which I was not an expert. As a theoretician, I was not 'a practitioner or an artist, but remain as a go-between, caught in the space between Page and Stage' (Pavis quoted in Freeman 2010, 280).

All this said, I have come to realise that even this model does not quite fit my practice. As a practicing academic, my purpose was to contribute to theory, and I did not dedicate my efforts to developing a performance genre. This is true even though I created a performance that was orchestrated publicly several times, and although I worked for *Chain Reaction* to become more than a laboratory experiment within the university and to spill out to the cultural scene. Even though it was shown in an experimental theatre house, and therefore needed to satisfy the theatre house's criteria for quality, I did not make the effort of developing it further, as practitioners often do.[29]

The crucial difference with Freeman's research through practice in performance is that my artistic work will not be evaluated *per se*. When evaluating this project for the doctoral degree, the evaluation committee will base their evaluation on the thesis, only. This does not mean that the practical work is irrelevant, but that it will be evaluated only through the theoretical reflection, and not separately as artwork. My own art practice in this project must submit to the prevailing PhD requirements and hence does not aim to be validated as a new artistic innovation. The work that counts in the evaluation is the thesis, and the practical work is understood to be pregnant in it.

In the second part of this thesis, I include a methodological article (article 1) in which I explore the interplay between practice and theory in the practical work of

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[29] Research colleague Lise Hovik (2014), also part of the theoretical PhD at NTNU, ascribed to the field of artistic research even though her practical work was not evaluated *per se* for the degree of PhD. However, throughout her PhD project she was committed to developing her performance practice in addition to her theoretical reflections, which are published in her thesis. Her artistic practice has since toured across Norway, being shown in different art circles, from museums to experimental and more established institutions. The PhD became a way for her to develop and establish a performance genre: theatre for babies.

Chain Reaction. I recommend that the reader read the article at this point, before proceeding to the next section.

3.3 Difficulties and Experiences

In this section, I will discuss some of the methodological challenges that confronted me as a result of generating the project's object of analysis using the method of research through practice in performance. I will also discuss challenges that occurred as a result of the interdisciplinary approach.

3.3.1 From the Practice-Based Research

There are several implications of generating the project's own object of analysis, in contrast to analysing existing works. Working in the studio to create *Chain Reaction,* I found it difficult to look outside of my own practice. *Chain Reaction* captured all my attention because it generated a lot of potential material for analysis. As a result of this, I considered making *Chain Reaction* the centre of the PhD project, dismissing other case studies and focusing solely on the category of pervasive performance, alone. This was something that I ultimately decided against, as I will shortly explain; however, this tension appeared many times during the project and can also be sensed in this text, in that *Chain Reaction* tends to take over the articles and reflections in this thesis.

What was gained from this practical work was full access to the intentions, production mechanisms and design challenges behind the work. This allowed me to produce research (articles 2 and 3) that contributed to the design field. When analysing other case studies, such as *Rider Spoke*, I depended on the literature generated around it, including publications by the team of creators and other sources reflecting on it. These sources presented their ideas on the valuable aspects of the work. However, no matter how extensive this literature was, it was always partial. With *Chain Reaction*, in contrast, I had access to all the material without having to gather it, which ensured a more complete overview. But, most importantly, I had access to all aspects of the project—the successes, forfeits and other aspects in between—which other sources might not have found interesting, but I did. This can be seen in the research I did on documentation (as explored in article 3), which is an aspect that emerged from practical work that I could contribute to, but which I had not planned beforehand.

Chain Reaction was central to the analysis of the category of pervasive performance, but was considered as just one more case study in the overall research project. Other case studies that are analysed in Part I and II are the performances *Ghost Road* (Murgia and Pauwels 2012), *make-shift* (Jamieson and Crutchlow 2010), *ON LOVE* (Abrahams 2013), *The Ethno-Cyberpunk Trading Post & Curio Shop on the Electronic Frontier* (Gómez Peña and Sifuentes 1994), *Homeward Journeys* and *Mata La Reina* (Yoctobit 2010 and 2012), *Sangre y Patatas* (Stevens and Law 2010) and, finally, *Rider Spoke* (Blast Theory 2007).

These case studies are important for three reasons. First, I needed them to represent the categories of multimedia theatre and telematic performance. My research questions stemmed from a tripartite categorisation of phenomena, focusing on multimedia theatre, telematic and pervasive performance. *Chain Reaction* only represents the last category, pervasive performance. So, focusing on only one category would have had the consequence of not allowing me to make a comparative analysis across them. Second, I needed to add insights from similar practices to facilitate my analysis. For example, *Rider Spoke* and the existing theory around it helped me identify the areas where I could contribute. And third, implementing several case studies helped me gain an analytical distance that enabled me to reduce bias and take a critical stance with my own practice, reducing a potential celebratory approach.

3.3.2 Bias

An important issue was balancing the project with regards to bias and determining whether my insights enforced my own prejudices and presuppositions or if I had managed to achieve a critical distance and challenge my own assumptions.

I started the project with the hypothesis that the application of digital media to contemporary performance may break conventions and create new art forms, which reads as a positivistic approach to technology as bringing positive change. In order to balance my research question, I included in my object of study a research question that asks whether there are instances where 'media may restrict aesthetic expression' (see section 1.3). I also made an effort to question the extent to which the application of media to performance added something new that could not have been achieved by means other than media; this is discussed in the articles and, more specifically, in section 6.7, in which I review earlier theatre and performance forms. Here, I am able

to discuss the newness that media may and may not bring, and conclude that only a few aspects can truly be considered new.

My intention with the performance experiment was to investigate the use of digital media in contemporary performance and analyse the ways in which media may benefit or disrupt the aesthetic expression. But did theory legitimise or challenge my own practical work with the performance experiment of *Chain Reaction*? I have used theory that is both positive and critical to the application of media in performance. However, I made an extra effort to include theory that takes a critical stance to technology, to counterbalance a celebratory bias, in order to gain a more balanced and detached view that shows both possibilities and limitations (Aarseth 2004; Berghaus 2005; McGonigal 2006; Dixon 2007; Waern 2009; Turkle 2011). For example, in article 2 (on participation and ubiquitous media), I use some of these theories to continuously reflect on what digital media afford that cannot be achieved without them. In article 3 (on documentation), I use the *Chain Reaction* case study to bring forward an alternative way of documenting participatory events, and also to point to its limitations, stating that it is not a finished model that can be replicated, but nevertheless points to possible paths to explore in the future.

Considering my lack of experience with artistic practice previous to this project, the mix of game and theatre that I created was likely to result in a rather basic and shallow theatre form. Even though I do believe this mixed form to have potential for development in the art and game scene, the tension between game and theatre would need to be further developed than I have had the means to do in this project, for the form to reach its full artistic potential. Instead of representing an "art" in its own right, I understand e.g. the final performances that participants devised to be theatre exercises similar to those that may take place within a classroom setting, but with an expressed artistic purpose.

3.3.3 From the Interdisciplinary Approach

This research project was interdisciplinary and brought together the fields of performance, digital media, experimental game design and art documentation. This multifocal character of the research can be seen as a strength as well as a drawback.

It was helpful to be acquainted with the ways in which different disciplines deal with similar questions. For example, in article 2, I use game scholarship that reflects on the use of technology in games (McGonigal 2006; Waern 2009) to draw

analogies to the field of performance and to examine the extent to which technology is essential or instrumental. This use of theory allows me to reflect on one practice (performance) in light of another (games).

In turn, I have been able to contribute to the game studies field. Article 4 examines how strategies coming from improvisational and performance art forms can be used in hybrid games to enhance players' behaviours and, in this way, add a level of unpredictability and serendipity in (digital) game systems. This insight aims at helping game designers be more aware of the different interactions that can be created between players and digital game systems, explicitly contributing to the game community of designers.

The drawback of this interdisciplinary approach is that the eclectic use of theory may also imply a lack of theoretical depth. I had knowledge of the convergent fields, but was not a core specialist in any of them. Stuart Moulthrop (2005) argued that moving across fields of study (his focus is on crossing theory and practical work) is beneficial to the researcher, as it is in the convergence of fields that innovation occurs. However, he also pointed to the drawback of this situation for the researcher, who is forced to become a specialist without the necessary means of doing so. Mastering other fields of study requires extra effort that is not contemplated in the research programme, in terms of both time and resources.

To a certain extent, the fact that this is an article-based thesis and not a monograph is advantageous in meeting these challenges. The thesis is composed of six articles that either have been published or will be published in peer reviewed academic journals. The qualifying process for publishing an article in an interdisciplinary journal benefitted this thesis, as the specialised reviewers made comments and suggestions about theoretical sources that helped me form better and more productive discussions that were enriched by their different disciplines. In this way, I was able to access theory recommended by specialists from different fields.

However, satisfying external reviewers from a number of different fields also had the consequence of forcing me to expand the use of theory to fields that, initially, I had neither the intention nor the qualification to enter. In this sense, the eclectic inflow of theory had, as its necessary consequence, a lack of depth.

Chapter 4: Theoretical Discussion

This is a study contemporary performance in its convergence with digital media. The theoretical framework draws on sources from *the avant-garde and theories of democratic culture* (4.1), media studies (4.2) and experimental game studies and design (4.3). A field that is included in this study, though to a lesser extent, is *experiential art documentation* (4.2.1), which I categorise as a sub-field of digital media studies.

4.1 Performativity, the Avant-Garde and Theories of Democratic Culture

Performance theory is a field of studies that was born in the 1960s in the United States, built around the concept of *performativity*. It is a reworking of the ideas of speech act theorist J.L. Austin, as presented in his book *How to Do Things with Words* (1962), in which he argued that words are not purely reflective, but have the power 'to make' a world. Performativity refers to the capacity of speech, gestures and performance to consummate an action and construct identity. According to philosopher and performance theorist Judith Butler, 'the performance of gender, (re) creates gender' (1990 and 1997), which means that there is not an essential or biological (sexual) identity from which speech and performance acts emerge, but rather, speech and performance acts have the power to construct gender through individual and collective iterations. In this sense, performativity refers to the way in which speech and performance acts affirm and confirm an existing reality, but also to the capacity to transform reality through these acts, which empowers individuals to speak up and act out, fostering social and political change.

If speech and performance acts have the power to empower people, can the field of theatre and performance—through its strategies and methods—create the potential for transformation and empowerment within the theatre and performance setting?

Even though most scholars of art and theatre support this argument, they diverge on how it is to be accomplished. The Aristotelian tradition uses empathy and catharsis to make the spectator reflect on her own situation[30] and the Brechtian tradition uses the famous 'estrangement effects' to create space for less complacent and more critical reflections.[31] The performative tradition advocates empowerment by including the *cultural participant* through (speech and) performance acts in artistic works. As 'performance can be seen as a form of agency, a way of bringing culture and the person in play' (Denzin 2003, 9), it could be argued that the performative tradition uses active participation to foster engagement.

However, what is it meant by active participation? On the one hand, participation may mean 'attending' a performance, such as 'observing' an act prepared by others, as done in both the Aristotelian and Brechtian traditions. On the other hand, participation may mean carrying out actions in relation to the performance, which may have a higher or lesser impact on the performance, as done in neo avant-garde forms of improvisation and play.

Here, the work of German theatre scholar Erika Fisher-Lichte is useful, as it illuminates the types of participation that are empowering. In *The Transformative Power of Performance* (2008), she examined the exchanges that have taken place between actors and spectators in performance practices since the 1970s. She argued for the transformation of a work of art into an event that is 'co-constructed by the bodily presence of both actors and spectators, generated and determined by a self-referential and ever-changing feedback loop' (2008, 38). But how is this self-referential and ever-changing feedback loop generated?

The performance practices that Fischer-Lichte analysed problematise the role of the audience. For her, the necessary ingredient for performance to acquire its full transformative potential is the exchange of energies on equal terms. Fischer-Lichte also warned us against 'the danger of role reversal' (2008, 40) in performance works that aim at creating situations of equality but end up re-creating the same situation with reversed power relations. This insight provides an important critical perspective

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[30] Aristotelian theatre relies, to a great extent, on empathy—the ability to identify with the protagonist, who was traditionally a figure of genuinely heroic proportions. By way of catharsis, spectators could relate to the stories and learn from them (Janko 1987).

[31] German practitioner and theorist Bertolt Brecht discouraged audiences from identifying with their (onstage) parts by using 'estrangement effects': distancing strategies devised to achieve critical distance. In this way, spectators would be able to more freely form an opinion about the situations presented to them (Willett 1964).

in article 3, in which I apply it to performance documentation to argue that archives of participatory events should be created out of collaboration between participants and designers, so that no group imposes a controlling gaze upon the other and no group is excluded from the documentation process.

Fischer-Lichte's contribution is important because she pointed to the crucial difference between 'open' performance works that 'invite' spectators into co-creating artworks, in that they 'creat[e] conditions for possible interactions to emerge' rather than steering the audience into pre-planned actions.

In the articles presented in the following section, I analyse technologically enhanced art forms with particular regard to the way in which they contribute to empowering the cultural participant. This is especially emphasised in the articles that investigate the use of digital media in interactive, participatory events in which the role of the spectator is transformed into that of the spectator-as-participant. For example, in article 2 ('Fostering Participation Through Ubiquitous Media in Pervasive Performance'), I examine the role of ubiquitous media in facilitating the transformation of the spectator role into several active roles in the performance experiment of *Chain Reaction*. In article 3 ('Experiential Documentation in Pervasive Performance: The Democratisation of the Archive'), I analyse the ways in which facilitating audience documentation may lead to empowering participants as documentalists. In article 4 ('Performance Meets Games: Considering Interaction Strategies in Game Design'), I advocate for the role of performativity in (video) game design to foster players' capacity for creating new layers of meaning. In article 5 ('Meaningful Connections: Exploring the Uses of Telematic Technology in Contemporary Performance'), I discuss two case studies of telematic performance, one of which belongs to the tradition of participatory performance that seeks to empower individuals through participation in artistic processes. And finally, in article 6 ('The Expansion of Theatrical Space and the Role of the Spectator'), I discuss the different modes of audience engagement afforded by technologically applied artworks. While some of these follow the Aristotelian tradition of receiving an artwork, others advocate a more active participation and co-creation of artwork, as in the Brechtian and performative traditions.

The ways in which these 'invitations' are created was one of the main concerns of the neo avant-garde. By introducing elements of play and by moving aesthetic events out into public space, artistic trends such as Happenings, Fluxus and

Situationist International, as well as improvisation and Theatresports, and then community theatre, Theatre of the Oppressed and site-specific theatre, aimed at transforming the role of the audience from traditional spectator into a more active participatory role, challenging the dichotomy between the performers and the audience. The underlying ideologies pointed to the participant as a creative agent and the issues of empowerment (Butler), and even transformation (Fischer-Lichte). In my research, this ideology was implied in some of the cases, mainly in the categories of telematic and pervasive performance. In the category of multimedia theatre, this ideology was not present, as the inclusion of digital media was mainly employed as another stage element for the performers. In the category of telematic performance, this ideology was present in some works and not present in other works. For example, in article 5, I compare two performances, *make-shift* (Jamieson and Crutchlow 2010) and *ON LOVE* (Abrahams 2013). The former connects to the ideology of empowerment through participation, while the latter does not, and is used more in the way that multimedia is. In pervasive performance, the political ideology is very present, as participation is offered through a combination of performance, play and media. In sum, my results say that digital media are employed in contemporary performance to empower and transform the spectator exactly to the same extent that they are not used to empower or transform her.

I understand performativity theory to be one of several theories that advocate the ideal of *democratic culture*. According to Balkin, 'democratic culture is about individual liberty as well as collective self-governance; it concerns each individual's ability to participate in the production and distribution of culture' (2004, 2).

Applied to the arts world, *democratic art* refers then to a situation in which individuals have a fair opportunity to participate in the production, distribution and consumption of art; they are not only offered the opportunity to consume art, but also to participate in production mechanisms of meaning-making (Dewey 1934; Kaprow 2003; Balkin 2004; Bruns 2008; Lessig 2008). Democratic art, as understood by the American progressive educator and philosopher John Dewey, advocates art in which the spectator is invited to co-create, and the focus of the work is 'on experiences', rather than intellectual messages. In his book, *Art as Experience* (1934), Dewey advocated the democratisation of the arts and championed the empowerment of the everyday, common person through encouraging her full participation in aesthetic acts and processes. Democratic art is perhaps better understood in opposition to the

traditional aesthetic rationale, wherein the artwork is seen as an autonomous commodity created by specialised artists. Theories of democratic culture are also generated outside of the arts field—for example, new media theory and the concept of the *produser*, or game theory and the concept of the player, and the effect of these concepts on performance—and I applied them to performance to help me think about how to foster participation. This can be seen in article 2, in which I contextualise the case study of *Chain Reaction* within the ideological framework of democratic art, mixing ubiquitous media and gaming to create a performance. In article 3, I argue that, in participatory events, documentation should also follow the ideal of democratic culture, and the archive should be opened to all those involved in the process of creating the events—orchestrators, participants, technicians and passers-by—rather than restricted to the artists alone, as is traditionally done. In article 4, I propose three ways of using performance in digitally mediated games to enhance the value of the actions of players and, in this way, create games in which designers and players interact on more equal terms. In article 5, I draw a comparative analysis of two performances, one belonging to the traditional aesthetic rationale and the other belonging to the democratic art tradition, to uncover the artistic purpose of using technology in telematic performance. And finally, in article 6, I use the two opposing cultural traditions to analyse the changing role of the audience and the ways in which this relates to or depends upon spatial confines by means of digital media.

While performance theory is concerned with invitations for participation that create the potential for empowerment, the theory of Relational Art focuses on participation and its many possible dynamics and outfalls in order to understand the implications of an active spectator.

In 1998, Nicholas Bourriaud coined the term 'Relational Art' in his book, *Relational Aesthetics* (1998), in order to describe the practices of visual artists who create considered social experiments as artistic practices inside the gallery. In his view, the value of this art is its sociality. He argued that, 'rather than paint, clay or canvas, intersubjectivity is itself the substrate of the art event' (1998, 14). The goal of Relational Art is to create social experiments in which being together is the central theme, 'the encounter' between beholder and picture, and the collective elaboration of meaning (Bourriaud 1998, 15).

Following this line of thought, Grant Kester (2004) advocated that social art be judged according to a social set of criteria, prioritising the encounter and the process.

Visual art critic Claire Bishop criticised both Bourriaud for his light-weighted analysis and Kester for his use of a social set of criteria. Bishop argued that 'the biggest problem around the discussion around socially engaged art is its disavowed relationship to the aesthetic' (2011, 26). Bishop was preoccupied with the division between the social and the aesthetic, and her mission was to establish aesthetic criteria in the analysis of social practice. However, in the process of establishing an aesthetic criteria, she ended up drawing an uncomfortable line that forced participatory practices to locate themselves as either 'good art' or 'bad art'. The bad side of the equation included works that 'do-good' and create 'feel good' collaboration, while works that are antagonistic, posing critical reflections, were considered satisfactory works of art.

Shannon Jackson took up Bishop's radical aesthetic approach to social practice in her recent contribution, *Social Works* (2011). Coming from the interdisciplinary field of performance studies, which connects to a global, social and anthropological perspective, Jackson is more tolerant of the blur between social and aesthetic frames than is Bishop, who was educated to navigate within the art institution. Jackson argued that, in a landscape in which artworks are increasingly heteronomous, and where 'improbable pairings' are common practice, instead of trying to helplessly scrutinise artworks in search of a criteria for quality—which will probably be polarised—we need to think about the social practice and the aesthetic together, using the language of interdependence. She argued: 'My sense is that both of these forms of artistic work [meaning do-good artworks and antagonistic, critical ones] produce a consciousness of artistic heteronomy and social interdependence together, though the techniques by which they achieve such coincidence differ' (2011, 60).

Her criterion then became the ways in which participatory works make participants aware of the infrastructures and social systems that support these encounters. In other words, participating makes the participant aware of her position in society and helps her develop a critical approach. To achieve this, the blur between the social and the aesthetic is a necessary ingredient. This position is indebted to the anthropological branch of performance studies, represented by theorists such as

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Victor Turner and Richard Schechner, who discussed the benefits and challenges of blurring the aesthetic and the social in ritual forms.

How does this discussion affect the field that converges digital media and contemporary performance? While it does not impact the category of multimedia theatre, it partly impacts telematic performance (works that are participatory) and, mostly, the category of pervasive performance, in which there is a playing audience.

I agree with Bourriaud and Kester that it is necessary to find alternative criteria for quality that incorporate participation, interaction and process, because aesthetic criteria for quality undermine the efforts of non-professionals. Bishop's view is reductive, as satisfactory artworks are those that are able to provoke critical reflections, only, and not other types of art that do not have such a strong political agenda.

With *Chain Reaction*, we wanted to make people reflect on certain issues through playful interactions in a positive environment. It was important for us to make participants feel safe and comfortable. This atmosphere of safety and security is crucial in participatory works, as participation may not happen unless this atmosphere is set. In this sense, it is normal for participatory art to tend towards creating a positive atmosphere, since a critical atmosphere might be counterproductive to the art form, itself. From the analysis of pervasive performance, we learn that it is possible to make people reflect critically on certain issues through playful interactions, and it is not necessary to put participants in uncomfortable positions. Here is where I counter argue Bishop, and align myself with Jackson: critical reflections can also happen through 'feel good' collaborations.

The pairing of the aesthetic and the social, or the observation of the aesthetic in the social, is something that Jacques Rancière articulated in his work, *The Politics of Aesthetics* (Rancière 2004). For Rancière, the aesthetic is a rehearsal for new possibilities in the social. In fact, the aesthetic is the most important tool for social change. Theatricality, or 'staging', otherwise allows the rehearsal of alternative possibilities that could not be explored otherwise, precisely because blurring the real and the fictional can be used as an alibi for rehearsing new possibilities, while it can simultaneously be dismissed as 'only fiction'. It is precisely this blur of the distinction between the aesthetic and the social that contains the potential for change.

Are these appreciations of the blurring of the social and the aesthetic exclusive to participatory forms, or can they also be applied to more observational art practices?

Rancière (2009) criticised the categorisation of active versus passive spectatorship, arguing that active participation does not necessarily make a more politically engaged participant. Both types of spectatorship contain the same possibilities, and one never knows exactly what activates people towards emancipation of diverse groups of people and/or individuals.

As this was a production and not a reception study, in which I examined and identified practitioner's strategies for 'making invitations', I was not able to know if participants were empowered to go out and 'take the streets', if the production afforded participation in societal issues, or, more concretely, if participants developed a more creative attitude and were more connected to the arts after participation. Perhaps conducting research on the audience would be the next step in this direction, using methods from the social sciences. In this way, we would be able to bring light to the debate over the relationship between the aesthetic and the social, from an experiential perspective, rather than a theoretical one, only.

4.2 Digital Media Studies

The second main theoretical framework is digital media studies, where it converges with the first theoretical framework of theatre and performance studies.

A current debate in this field concerns the definition of intermediality when applied to performance practices. This framework understands the performance event as a multimedia event in which different media relate to each other, regardless of whether these elements are live or mediated. In a field in which the presence of performers and spectators has been considered the fundamental characteristic of the theatre and performance medium, thinking in this cross-disciplinary way challenges the foundation of what theatre is.

American performance and music theorist Philip Auslander's seminal work, *Liveness* (1999), examines how the use of digital media in performance— specifically in musical performance—has changed the way we understand 'liveness'. In his view, liveness can be created even though the performer may not be physically present, but only mediated. This is because every element in performance is always already mediated. He argues that the relation of opposition perceived between the live and the mediatised exists only at the level of cultural economy, and is not rooted in ontological difference (1999, 11).

Following the same line of thought, German theatre scholar Christopher Balme (2010) examined how the role of the audience is impacted by the use of digital media. He argued that, in a situation of proliferating mediascapes, the concept of the audience as we know it becomes outdated, as it needs to incorporate new ways of engaging with a work that do not imply physical co-presence. Balme's proposal is to think of the public sphere as the new audience, identified by online connection rather than physical co-presence.

Norwegian media and performance theorist Ragnhild Tronstad has in a recently published article analysed how a sense of presence was conveyed to her while participating in an SMS performance in which she was not physically co-present with either performers or spectators. She argued that this sense of presence was obtained 'through medial means; more precisely through the medium of words' that were mediated through a mobile phone (2014b, 2).

Is multimediality a hierarchical set-up still privileging the live performer, or does the performer become just another medium in the performance? These sources agree in the fact that a performative presence can be experienced even when the live elements deemed as fundamental are absent. The implications of this is that the role of the actor, for example, looses importance, as its role can be performed by a combination of other elements. I address this question in chapter 6, in which one of the discussions revolves around media's impact on the role of the actor. In my research, performative presence could be experienced even when the live elements deemed as fundamental were absent. In my categories, I realized that digital media did not work against the live performer. The author/ performer was always still there, but she was mediated through different strategies.

The theoretical sources I studied from media studies can be divided into two separate groups: first, those that analyse the aesthetics of the new technologically enhanced performance forms; and second, those sources that analyse the impact of digital media on society as a whole.

The work of British performance scholar Steve Dixon is, to date, the largest compilation of the most technologically enhanced performance practices under one title: *Digital Performance* (2007). This source provided me with an idea of the state of the art in terms of artistic practices, and also in terms of theory—a place of departure that was the basis for this thesis.

Particularly, Dixon discussed the way in which practitioners use screens and projections onstage in combination with stage action, and how this practice creates an in-between space where new meanings are created and communicated. This thought is shared by British drama scholar Greg Giesekam in *Staging the Screen: The Use of Film and Video in Theatre* (2007), a source I used to gain a better understanding of the aesthetics of multimedia theatre and its history.

The identification of the in-between as a space in itself is the starting point for a discussion in article 6, in which I argue that the in-between space is a useful metaphor for thinking about how meaning is made when projections are used in combination with stage action.

When analysing the aesthetics of telematic performances, Dixon argued that high-tech performances tend to focus on demonstrating new technology rather than creating a dramatically fulfilling piece of theatre. This critique—shared by other performance scholars, such as German Günter Berghaus (2005) and American Jane McGonigal (2006)— became the starting point for article 5, in which I analyse two telematic performance works that go beyond technological demonstrations, pointing to the aesthetic of telematic performance as a genre.

When studying telematic performance, my basic sources were found through collaboration with the Teleimmersion Department and the Dance Department at the University of California at Berkeley, while I was a visiting scholar in the Department of Theatre, Dance and Performance Studies (2009–2010). The research group had published papers in conference proceedings and articles in journals from both the technologists' (Yang et al. 2006; Kurillo et al. 2008) and artists' perspectives (Nahrstedt et al. 2007; Sheppard et al. 2007; Nahrstedt et al. 2008), which reflected on the dance experiments and performances conducted by the research group. More sources were found thanks to attendance at the Remote Encounters conference (12–14 April 2013 in Cardiff, Wales). This conference gathered a variety of practices— including high-tech and low-tech telematics—and featured talks by theorists and practitioners, allowing conference attendees to pose questions to the presenters in roundtables and post-talk conversations. In my work in article 5, I apply these sources to discuss and understand the role of telematic technology in telematic performance

and its aesthetics, using two performances from the conference as main case studies: *ON LOVE* (Abrahams 2013) and *make-shift* (Jamieson and Crutchlow 2010).[32]

The research conducted by the Integrated Project on Pervasive Gaming (IPerG), coordinated by the Swedish Institute of Computer Science, was my main source when researching pervasive performance.[33] The project developed more than fifteen pervasive games and software packages to support the development and staging of the games. The written reflections on the use of technology (Benford et al. 2002; Benford et al. 2006) and the impact of this practice for performance (Giannachi et al. 2010; Giannachi et al. 2012; Chamberlain et al. 2010; Benford and Giannachi 2009; Benford and Giannachi 2011) became important for my understanding of the role that media play in pervasive performance. These sources argue that media are instrumental in some cases, while fundamental in others.

In article 2, I apply theory from *Performing Mixed Reality* (Benford and Giannachi 2011) and use examples from the IPerG project, such as *Rider Spoke* (2007) and *Fairground Thrill Laboratory* (Walker 2006), and interviews with the creators of the events in which they reflect on the performances, to later discuss the role that digital media plays in prompting players into participation. I find that, in these works, there is always a combination of game, performance and technology that contributes to lowering the threshold of participation. It is almost an impossible task to separate what exactly prompts participation. However, in my experience with *Chain Reaction*, I learned that it was the game design (and not the technology) that fostered participation in the audience. On the other hand, the role of media was crucial in the generation of documentation by the audience.

A discussion in this field has been whether the impact of digital media on cultural products results in the democratisation of culture due to the participatory option. Some sources take a positive stance on this, while others remain critical to the promise of democratisation via participation.

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[32] According to the artists, the original titles of these performances are as follows: ON LOVE and make-shift. I am rendering them in italics here to signal that they are titles of artworks, in conformity with Chicago style.

[33] This was an EU funded project that ran from September 2004 to February 2008, in collaboration with international partners. The management team consisted of Dr Annika Waern, Prof. Steve Benford and Dr Vartkes Goetcherian. The partners were: Interactive Studio, Play Studio and Zero Game Studio; University of Tampere, hypermedia laboratory; Nokia Research; University of Nottingham, Mixed Reality Labs; Frankhofer Institute, FIT; Sony Europe; Gotland University and Blast Theory. For more information on the project go to: http://iperg.sics.se/index.php.

American media theorist Lawrence Lessig analysed online *remixes*: songs, videos, photos and other manipulated media distributed through YouTube and other content-sharing websites (2008). To him, these are amateur forms that signify a new form of media culture—the read/write culture—in which it is normal to create multimedia with the help of pre-existing media content created by others. In his view, amateurism involves a form of *bildung* (education), the cultivation of an appreciation of culture and a more active way of participating in it.

A connected source is Australian media scholar Axel Bruns, who argued for the rise of new products and new agents in the digital age. He claimed that, as user-led content creation grows and proliferates in a variety of online environments—with seminal examples such as Wikipedia and YouTube—the concept of the user proves limiting. He pushed for an expansion of the concept to embrace this new model of shared production, and introduced the concept of the produser (producer + user): an agent who blurs the boundaries between passive consumption and active production, and often alternates between the two roles (Bruns 2008). Lessig and Bruns shared the ideal of democratic culture with John Dewey, Allan Kaprow and Erika Fisher-Lichte, but applied the democratic ideal to digital cultural products on the Internet.

Lessig and Bruns helped me illuminate the question of how practitioners can facilitate participants in cultural events to also document the performances creatively, and in what ways this can be done through online documentation. I examine this phenomenon in article 3, in which I use the analogy of the produser to help me imagine a more fluid transformation of roles in the spectator, who is able to alternate between participation in an event and documentation of that event. The concept of the produser echoes the concept of the Spect-Actor, combining action and reflection, with the former referring to dynamics taking place in virtual environments and the latter referring to those taking place in live environments.

However, these theories seem to apply to an agent for whom produsage is a way of living: a lifestyle that happens repeatedly, wherein produsers learn to appreciate their behaviours whilst simultaneously developing them as they progress. In my research on pervasive performance, I did not observe this focus on constant learning and evolution. *Chain Reaction*, for instance, is a one-time performance. This means that participants do not have the opportunity to develop or improve their acting or performing skills over time. Nonetheless, as I discuss in article 2, participants in *Chain Reaction* gain a sense of what acting and performing feels like. On the other

hand, it could be also argued that pervasive performance provides 'shallow' play and may not fulfil the promise of democratisation through participation that these sources argue for.

As the practices I analysed mixed the live and the virtual, a question that often came up was whether digital media stands in the way and disrupts life or, on the contrary, whether it facilitates life. Here, I found sources that take a positive stance towards media and others that are more sceptical. An example of the former is Danish media theorist Carsten Stage's (2012) observations of the use of audio-visual documentations by audiences at music events, where mediation of the concert contributes to new forms of expression. This means that, even though mediation may detract attention from the event taking place, it is a 'necessary distraction' that allows for new areas of expression that are worth exploring.

A source that poses a critical stance to media is the work of American social scientist and psychologist Sherry Turkle (2011), which refers to the ways in which new communication technology affects human relations at a time when technology has pervaded all aspects of human activity. She argued that, on the one hand, technology allows us to feel connected and to gain a sense of companionship when we are physically alone; on the other hand, it keeps us constantly connected even when we are physically together, distracting us from actual physical interactions. *Alone Togetherness* is thus a situation that contains elements of both possibility and limitation. I applied Turkle's concept to two performances (discussed in article 5) to determine the ways in which the performances materialised her ideas about technology. In this way, I was able to clarify the aesthetic value of telematic performance as a genre.

At the convergence of digital media and performance, I found an integration of digital media and observed that the alternation between the live and the mediated is fluid and internalised by participants. In multimedia theatre, digital media become additional elements on the stage; in telematic performance, media allow for communication with remote locations whilst also making us aware of the technological infrastructures and human effort required for this communication to occur; in pervasive performance, media are used to make participants aware of the physical environment they are in.

4.2.1 Experiential Art Documentation

The third field of study I investigated is art documentation—more specifically, sources from New Media Art that examine experiential, user-led documentation. Practically, the field of theatre has not been concerned with this specific type of documentation, but has mainly focused on documenting stage performances with new digital tools, incorporating the process of creation into the documentation (Freeman 2003) and developing multimedia tools that can reflect the complexity of the creative process (Dixon 1999). Theoretically, the field of performance studies has been concerned with questioning the nature of documentation and its troubled relationship with the performance event. Representing the two opposing sides, Peggy Phelan (1996) stated the impossibility of documenting the ephemerality of performance, while Philip Aulander (2006) argued that documentation may also reflect the aesthetic projects of the artists involved, precisely because of documentation's performative potential.

Neither of these sources specifically examine participatory forms, wherein 'process' and 'intersubjectivity' comprise the 'substrate of the art event', and therefore do not consider that this co-creative dimension may have implications for its documentation. My position is the following: If we ask participants to co-create artwork, shouldn't we also ask them to co-create its documentation?

As I was interested in investigating the possibilities for documenting interactive events with mobile participants distributed in public space, I turned to two research projects that were investigating audience-driven documentation in interactive installations in museums—namely the new media documentation projects by the Daniel Langlois Foundation, a centre that has been documenting New Media Art since the turn of the twenty-first century. These theoretical sources (Jones 2008; Jones and Muller 2008; Muller 2008; Depocas 2002; Depocas, Ippolito, and Jones 2003) point to the relevance of combining experiential documentation (from the audience) with authorial documentation (from the artist) to create archives that convey a more complete view of an artwork. In their research, they apply methods from the social sciences to access information from the viewer's point of view (captured mainly in interviews), rather than following humanistic methods of reflection that make assumptions of the audience's reception of the work.

In *Chain Reaction*, this ideal combination of authorial and experiential documentation became a reality. In article 3, I discuss the possibilities and challenges of mixing audience documentation with designers' documentation in the construction of shared archives. While I agree with the abovementioned sources that archives should include the experiences of users or participants, in addition to authorial perspectives, these theories still see archivists or authors as the gatekeepers of this job, requiring professional archivists to collect participants' comments/stories/experiences through interviews and not letting participants contribute themselves to the documentation in the first person.

I also examined a similar model, CloudPad, developed by an interdisciplinary group of designers from the fields of games, performance and human–computer interaction. This documentation model theorised and also practically developed a tool for all participants (authors, players and passers-by) to contribute by filling in content.

The theoretical outcomes of the CloudPad research project (Giannachi et al. 2010; Chamberlain et al. 2010; Giannachi et al. 2012) were central to helping me bring forward smart, low-tech solutions for document participation that did not require vast resources. They also made me aware of the benefits of setting a framework that participants could fill in with content and, in so doing, produce archives in which meaning would be generated through the juxtaposition of data. The strength of the CloudPad model is its ability to gather all documentation on the same site, instead of scattering it over the Internet, and also its ability to allow all participants to contribute, in the first person, to documenting the event. *Chain Reaction* can be seen as a complement to CloudPad, and *Chain Reaction*'s strategy of making documentation part of the aesthetic event could be used to ensure that participants contribute to documentation in the CloudPad tool, so all documentation is gathered in one central place.

4.3 Experimental Game Scholarship and Design

Certainly, the convergence of games and theatre is not new. For instance, the tragedy competitions that were held during the Dionysian festivals of the Athenian Golden Age (around 530 BC) are examples of such a convergence. In the tragedy competitions, each author presented three tragedies and a satire, and, at the end of the festival, there was a winner. In order to decide on the best play, a lottery was organised among the citizens to decide who would judge the plays, and the judges

determined the winner using the opinion and reactions of the audience. In other words, the convergence of games and theatre might have a story of its own, and it would have been useful for me to study the convergence over history to understand the perceived benefits of this convergence over time. In this thesis, to help me understand the phenomenon of pervasive performance today, I examine neo avant-garde art forms (chapter 2) and the way in which they were born out of theatre practitioners' use of play and game rhetoric. The theoretical foundation I use to understand how games—including their characteristics and affordances—can be applied in a way that benefits performance is the current scholarship on the theory and design of games.

Computer game studies is a young field of research that considers computer games phenomena of cultural importance and forms of expression that are distinct from related cultural forms such as literature or film.[34] Theories of game design are concerned with the different elements that compose a game—similar, in some respects, to how the concept of dramaturgy is concerned with the different elements that compose a performance event.

According to game scholar Espen Aarseth, games lower the threshold for participation, facilitating the transformation of spectators into active participants, as they require the creative involvement of players (Aarseth 2001). This makes game design a particularly apt tool for creating participatory performance events. Substituting the theatre frame with a game frame, players already expect to be involved when they come to the event.

Artist and founding member of Blast Theory, Matt Adams, argued that 'games give *large amount of people* a motivation to interact, a readily understood means to do so, and a highly varied landscape to explore that allows each player an almost unique experience' (Adams 2009, 237, emphasis mine). In games, everyone plays —not only a selected few, as is mostly the case in theatre and performance settings. In improvisation, for example, the audience provides suggestions for the performance but the improvisers are the only actors. In the Theatre of the Oppressed, a crew of

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[34] In 2001, Norwegian game theorist Espen Aarseth started the first peer reviewed journal dedicated to computer games. See post entitled 'Game Studies, Year 1' here: http://www.gamestudies.org/0101/editorial.html. His PhD thesis, titled *Cybertext: Perspectives on Ergodic Literature* (1997), argued for the need to understand games in their own right, rather than as a form of literature.

professional actors supports the actions of one or a few Spect-Actors. In games, on the other hand, no spectators are required, only players.

Pervasive and ubiquitous games—that is, games that use the real world as a playground—make players aware of the ludic possibilities in the world around them as they search for and experiment with the hidden affordances of everyday objects and places (McGonigal 2006, 236). This has a clear connection with the discovery impulse that the Situationist International and the Happenings aimed at creating in their participants: an attitude for discovery.

I used these insights in the design of *Chain Reaction*. For example, the fact that, in *Chain Reaction*, everyone was asked to play, was inspired by Adam's stated goal of motivating players to massive participation. Also, the *Chain Reaction* task designs often used the environment as an important element for composition. This was indebted to McGonigal's identification of the ludic possibilities inherent in the environment.

The rising popularity of gaming in society includes the development of game genres that have a serious purpose—that is, a purpose other than merely encouraging ludic activity (McGonigal 2006 and 2011; Bogost 2007). Labels such as *serious games*, *persuasive games* and *games for change* rest in the belief that games can be used to foster social change and tackle social problems through play. The debates in this field focus on theoretical questions that revolve around the hypothetical benefits of gaming for the phenomena to which they are applied—questions such as: How do we measure the outcome? Is this outcome long-term or temporary? Relevant questions also concern the design approach; for example: How can external purposes be integrated into the design? Should the purpose be embedded in the theme, or could it be embedded in the game dynamic or the mechanics? The marketing phenomenon of gamification, defined as 'the use of game design strategies in non-game contexts' (Deterding et al. 2011), is part of the trend of serious games. This sub-field has specifically been concerned with ways of adding reward mechanics through point systems, leading game designer and critic Margaret Robertson to argue that gamification should rather be labelled 'pointsification', as it is all about adding points (2010). There is a body of work that remains critical of both serious games and gamification, arguing, for example, that neither seem to produce very engaging games, due to the producers' apparent lack of competence (and interest) in game design (Kohn 1993; Deterding 2010). The core of the problem lies in the fact that,

according to most definitions of games, playing should not serve an external purpose outside of the game.[35] When serving an external purpose, games are no longer 'intrinsically motivating', which is a basic characteristic pointing to how games are and should be engaging in themselves. In this sense, it is neither compatible with theories of play nor with playing itself to make games with an external purpose. This explains why it is so difficult to make truly engaging games that serve a different purpose than merely being 'for fun'.

The same kind of problem is expressed in the modernist ideal of 'art for art's sake', in which 'autotelic' art is supposed to be divorced from any utilitarian or didactic function, and be complete in itself. The avant-garde movements opposed against this ideal, and the art forms born around this time have been exploring this tension for decades now. For instance, applied theatre, described in chapter 2, has effectively used theatre as a tool for solving social issues through performance, combining dramaturgy with a serious purpose. Here we have an example from a neighbouring field that considers the tension between the art form and the external purpose, as a productive one.

To a certain extent, I agree with the view that it is challenging to create good games while also including an external purpose, to the same extent that it is challenging to create theatre for social change. But it is not impossible: some serious games do, in fact, also function as good games; for example, *Cruel 2B Kind* (Bogost and McGonigal 2006) and *MINI Getaway* (Jung von Matt 2010). The former, mentioned in 'related works' in chapter 2 (section 2.1), is a pervasive game in which teams of players 'kill each other' with compliments on the streets. Depending on the chosen location, the game can be an effective tool for social critique.[36] The latter is a mobile game and an advertisement campaign for the car MINI Countryman, in which players chase a MINI across the city of Stockholm twenty-four hours a day for seven days.[37] Both games are engaging games that also effectively integrate an external purpose: reclaiming the city in *Cruel 2B Kind* and branding a car in *MINI Getaway.*

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[35] See, for example, Roger Caillois definition of game presented in section 1.4.4 'Game Concepts'.

[36] See Ragnhild Tronstad's analysis of *Cruel 2 B Kind*, in which she explored the connection between game mechanics and the external purpose of 'critical play' (2012, 225–9).

[37] On the webpage of the advertisement agency, the game is described as follows: 'To take part, users needed an app that enabled them to look for a virtual Mini Countryman hidden within the inner city. If they got within 50 metres of the car they could grab - or "tag" - it with their iPhone. Once tagged, the virtual car could be pinpointed then grabbed by other players as soon as they were with 50 metres of it. The winner, whoever had the virtual car by the game's end, won a real Mini'. See videos and campaign

In *Chain Reaction*, it was important that players found the game design engaging. We did not just add game elements to be able to call it a game—and in this way opportunistically adhere to the raising popularity of games in society—but wanted to present players with game design engaging enough to lure them into playing and performing. It was challenging to find a balance between the game design and our external goal, which was to facilitate participants' hands-on engagement with theatre and performance. Our purpose, other than the game itself, was to activate them in artistic practice.

Of course, to fully test whether *Chain Reaction* was both engaging as a game and successful in fulfilling its external goal, one needed to experience it. However, we assumed that *Chain Reaction* worked as a game, since no players abandoned it (as they could have done by simply not showing up at the final checkpoint). Having received informal feedback from players after the event, we also learned that some of them were thrilled to have played and performed in the way that they did. We learned that it is necessary to integrate play and purpose in the different elements of the design, such as the dynamic, the rules and the story. This confirms the critique of serious games explained above, that simply adding game design elements into an external purpose does not suffice. The event needs to work as a game, first and foremost.

The question then becomes if *Chain Reaction* worked as theatre. To what extent was the external purpose fulfilled? *Chain Reaction* made participants engage with theatre forms, to *get a taste* of what it can be to perform and act. However, it didn't achieve the same extent of seriousness that applied theatre does, for example, where we have a constant re-working of social issues through theatre over time (creating community, etc). Following the previous discussion, it might be interesting to note that as the game was prioritized, less weight was put on the external purpose.

I used several sources that reflect on the role that technology plays in the game field to help me understand the role of technology in *Chain Reaction* (article 2), as well as in other performances (article 5). A source that highlights the political stakes of technology when applied to cultural products is game and performance theorist Jane McGonigal's doctoral dissertation, *This Might Be a Game* (2006). Her insights and perspective had an impact on this thesis, as a whole, as I used it as a criterion to

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information on the advertisement agency website: http://www.jungvonmatt.se/MINI-Getaway-Stockholm.

select all of the performance works that I analysed as case studies. In her study, McGonigal analysed how ubiquitous media may be used for creative expression. She examined the field of ubiquitous games and performances and discovered that most of the existing works had been created within university research departments and not by other types of agents. Her investigation showed that the resulting games and performances—which she called *ubicomp* games—remained as laboratory experiments of scientific departments in research institutions, being used mainly as academic proof and becoming part of a large 'network of citations' that legitimated the genre within the scientific community while also producing research insight. Games created within the frame of the university rarely spill down into culture, as they are often too high-tech to be performed outside of the laboratory and also too high-tech to be repeated more than once. There are other types of games, however, which McGonigal called *ubiquitous games*; these prioritise gameplay over technology, and are created by artists, experimental game designers and, most importantly, ordinary gamers, outside of the university setting and independent of research agendas. To McGonigal, such low-tech games reveal the true aesthetics of the genre, and she asserted that these are the ones we should study.

I tested McGonigal's observation on the three categories of multimedia theatre, telematic performance and pervasive performance, to see if I could identify the agents involved in the production of these works. While the categories of multimedia theatre and pervasive performance showed works being developed within a variety of settings and by a variety of agents (including university departments, the private industry, independent artists and ordinary people), the category of telematic performance echoed the situation of the ubicomp games that McGonigal described. This theoretical contribution was central to my discussions in article 5, in which I analyse two low-tech performances. McGonigal's insights inspired me to select performance works for my analyses that used existing, available technology and that took place in regular performance circles, to show the real state of the art rather than merely showcasing how new forms of performance might be created with the new technologies.

Even though McGonigal's insights were helpful for my selection of material for analysis, her critique of high-tech had the consequence of generating a bias in my own work, which can be sensed in a somewhat negative articulation of Shock and Awe aesthetic.

I think McGonigal has a valid and important point when explaining how hi-tech cultural works often come together with a set of political agendas that may ultimately work to the detriment of the artworks. However, in my research in the category of telematic performance, I came to realise that low-tech works also come together with a different set of political agendas. Furthermore, the low-tech performances that I analyse in article 5 approached high-tech to a greater extent than I was initially aware of. In fact, the two performances could just as well be considered high-tech, as they were developed partly by university departments (in the case of *make-shift*) or tailor made by a software developer/artist (in the case of *ON LOVE*). As I tried to trace those involved in the production in order to clearly identify them as either high-tech or low-tech, I realised that it was impossible to clearly establish which of these best applied. The artists were enhancing the low-tech nature of their projects because they wanted to connect to the philosophy of open source movements, open participation and democratic exchange. However, advertising oneself as low-tech does not automatically imply that the performance fosters a democratic ideal, as demonstrated by the performance *ON LOVE*, which shows a traditional dichotomy between audience and performers.

Chapter 5: Summary of the Publications

All six articles have been published. I have arranged them in chronological order, according to the time at which I started writing them; this ordering also corresponds with the research activities in which I was immersed when I wrote the articles. The articles were edited in accordance with the different style guidelines and reference systems required by each journal, which differ from the style used in Part I of this thesis. Thus, while I unified the layout in this thesis for more coherent reading, the articles differ from each other in terms of style.

Article 1: 'Academic Research and Artistic Practice in *Chain Reaction*: Methodology on Two Levels'
This article was published in *InFormation – Nordic Journal of Art and Research* (Vol. 3, No. 1, 69–82, June 2014).

It describes the ways in which an academic method of research was combined with an artistic method in the production of *Chain Reaction*, a creative project developed by the author as part of her PhD programme, using the methodology of *practice-based research*. The article describes the research design and it presents the negotiation between two questions throughout the project—artistic and academic—by analysing two significant processes: devising artistic work with collaborators and working with theory. It argues that the cooperation between artistic practice and academic research enriches each field while simultaneously creating a strong form of cultural practice with both aesthetic and epistemological elements.

Article 2: 'Fostering Participation Through Ubiquitous Media in Pervasive Performance'
This article was published in *Ubiquity: The Journal of Pervasive Media* (Intellect; Vol. 3, No.1, 12-30, 2014). I presented an earlier version at the Games: Design and

Research conference at Volda University College in Volda, Norway on 3–4 June 2010, and also at the 16th Performance Studies International (PSI) conference in Toronto, 9–13 June 2010.

In this article, I reflect on how ubiquitous media can foster creative expression, participation and collaboration in pervasive performance, and how conventions of spectatorship and participation are challenged through this application. I use the methodology of practice-based research and draw on the case study of *Chain Reaction* (2009 and 2011). It describes how ubiquitous media were used in this piece, the artistic and academic intentions behind it and the decisions and compromises that had to be made by the team of collaborators during the process of its realisation. The article then analyses the implications of using ubiquitous media in the performance event.

I conclude by stating that the combination of three elements—performance, game and ubiquitous media—enables spectators to cross conventional thresholds and experience different participatory roles during one and the same event—going from spectator to (performative) player, theatre actor and documentalist. In this way, ubiquitous media are suited to developing a performance genre that seeks to empower the cultural participant. The important contribution afforded by ubiquitous media, alone, is the ability to launch the documentalist—a role that could not exist without this technology.

Article 3: 'Experiential Documentation in Pervasive Performance: The Democratisation of the Archive'

This article was published in *International Journal of Performance Arts and Digital Media,* (Vol. 10, No. 1, 77–99, June 2014).

In this article, I examine the way in which performance documentation is radically challenged in pervasive performance practices through digital media, due to the events' participatory, mobile and distributed nature. Because of these characteristics, pervasive performance forces the creation of alternative capture strategies outside of the theatre house, as well as the creation of archives in which participants are included as contributors.

I describe the challenges of trying to document such performance, using the case study of *Chain Reaction*, and propose alternative solutions to meet these challenges. My hypothesis is that, in a situation in which participants are increasingly

documenting their own actions across platforms in the mediasphere, practitioners can foster the transformation of the participant into a documentalist as part of the cultural event through game design strategies. The inclusion of the everyday person in the archive brings us closer to the ideal of democratic aesthetics and the empowerment of the cultural agent.

Article 4: 'Performance Meets Games: Considering Interaction Design Strategies in Game Design'

This article was published in the journal *Digital Creativity* in September 2013 (Vol. 24, No. 2, 157–64). It is co-authored with independent game researcher Lara Sánchez Coterón, PhD.

In this article, we examine how experimental performance practices can contribute to a re-thinking of game design. In this sense, the article presents a counterpoint to the main focus of the dissertation—examining how digital media contribute to re-imagining performance—and adds to our understanding of the ways in which performance can contribute to a re-thinking of the digital aspect in games.

We use several case studies to help us describe what we call *human-to-human interaction* (H2HI) in game design at three different levels. First, having designers improvise according to players' actions in real time; second, substituting computer game characters for human actors who perform according to players' suggestions; and third, looking outside the traditional computer game environment for a computer-mediated human playground. These strategies can be used by designers to add a sense of unpredictability and serendipity to the game, while simultaneously generating social experiences around games.

My contribution to this article was the description of the fields of improvisation and performance art, and the analysis of how they can be used in games. The co-writer, Dr Lara Sánchez Coterón, was responsible for identifying the niche to which the article aims at contributing in the field of game design, for providing the case studies and for contributing part of the analysis.

Article 5: 'Meaningful Connections: Exploring the Uses of Telematic Technology in Performance'

This article was published in *Liminalities: A Journal of Performance Studies*, in a special issue (Vol. 10, No. 2, May 2014) dedicated to the Remote Encounters conference held in Cardiff, 12–13 April 2013, in which I participated.

Telematic or networked performance is an art form that emerged in the 1980s and applies telecommunication technology to performance. Today, there are typically two versions: high-tech and low-tech. High-tech telematic performance has been criticised for focusing on developing the technical and dismissing the aesthetic, by merely displaying the telematic connection in a theatrical manner (Dixon 2007). In this article, I look at performance works that go beyond the mere technological display of the connection and examine what the technology is used for in aesthetic terms.

I conduct a comparative analysis of two telematic performances that represent two large trends of practices within the field. On the one hand, the performance *ON LOVE* (2013) by Dutch visual artist Annie Abrahams uses telematics to create visual and dramaturgical juxtapositions. On the other hand, the performance *make-shift* (2010) by British theatre directors Helen Varley Jamieson and Paula Crutchlow uses telematics to engage remote audiences into active participation and collaboration. Through the analysis, I attempt to identify the purpose behind the technology while bringing forward the artistic strategies that are used; this helps me develop an aesthetic of telematic performance.

Article 6: 'The Expansion of Theatrical Space and the Role of the Spectator'

This article was published in *Nordic Theatre Studies* in a special issue on 'Technology and Theatre' (Vol. 26, No.2, 35-46, June 2015).

One of the performance conventions that has been challenged by the application of technology is that of space. According to some research sources, the theatrical space has been 'expanded' through the application of technology and its artefacts. However, it is not really clear what is meant by 'expansion', as it means different things to different authors and these divergent meanings often lead to misunderstandings. In this article, I demonstrate the need for a more nuanced understanding of what the expansion of theatrical space means, as well as the political and aesthetic impulses behind the expansion of theatrical space and its discourse.

The analysis is based on three distinct forms of technologically applied performances in which spatial expansion has been an issue, and three categories that also mark the heterogeneity and dynamism of the arena of technological theatre today: multimedia theatre, telematic performance and pervasive performance. Through an analysis across specific cases, I aim to show how the expansion of space can be connected to an expansion of the role of the spectator.

Chapter 6: Main Findings and Further Discussion

In this chapter, I answer the main research question: How does digital technology challenge and/or re-configure traditional conventions in contemporary performance? These findings arose from looking across the analyses and discussions in the articles included in this thesis. Thus, the chapter is not a mere summarisation, but rather a résumé and platform for further discussion.

6.1 The Aesthetic of the Computer Pervades Dramatic Forms

Steve Dixon (1999) argued that, during the 1980s and 1990s, the arts—but more particularly drama—were used extensively as a metaphor for understanding computer science. Dixon claimed, 'Within computing, drama theory has been afforded a special place, and the importance of theatre as a model for software program design has been widely discussed by critics in the computer sciences' (158). As Brenda Laurel put it in her *Computers as Theater* (1991), 'theatrical metaphors pervade software applications' (159).

My research suggests that the application of digital media to contemporary performance results in the aesthetic of the computer being replicated in dramatic forms. While in the 1980s and 1990s it was theatre and its metaphors that pervaded software,[38] in our current times we see the opposite also happening, with software and its metaphors pervading theatre (and art) (Hilton 1993; Manovich 2001). This confirms the concept of intermediality, which argues that there is a mutual reciprocity

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[38] We also see a body of theoretical works from the humanities at the turn of the twenty-first century, using concepts from the arts to analyse digital phenomena. For example, Kjetil Sandvik (2003) used dramaturgy to analyse and produce interactive multimedia narratives in computer games. Anita Hammer (2001) used ritual and performance frames to understand digital communication in textual environments on the Internet (MOOs). And Ragnhild Tronstad (2003) used performativity and theatricality to understand different forms of interaction in Multi-User Dungeons (MUDs).

when media and theatre come together. In the analysis conducted in article 6, I show that different technologies leave different 'marks' on performance. In the category of multimedia theatre, with the application of video technology and film onstage, we see a turn towards visual dramaturgies, whether these follow Aristotelian or post dramatic principles. In the category of telematic performance, with the application of telecommunications, we see a focus on different forms of 'interaction' between remote partners that apply the rationale of the 'user' that is often used in digital communication. In the category of pervasive performance, with the application of mobile media, we see the development of a distributed aesthetic that applies the rationale of the 'mobile player'. Digital media—their characteristics and what they afford— become an important aspect in defining the aesthetics of the categories, as they impose a direction and prioritise themselves over other dramaturgical elements. However, even though they might determine a certain direction, affording certain aspects and not others, practitioners also have their own set of methods and strategies that allows them to modify/change/enhance/revert that technological 'determinism'. Some practitioners, such as Annie Abrahams, aim at revealing the aesthetic possibilities of telematics, while others take a more critical stance and aim at revealing its limitations. In other words, it is ultimately up to practitioners to decide how telematics should be used.

6.2 Expansion of Space: New Ways of Being Together While Still Being Apart

An important convention that is challenged through digital media is that of space. Article 6 describes how the application of technology allows for an expansion of theatrical space, from inside the theatre in multimedia theatre to private households in telematic performance and all the way to public space in pervasive performance. Theatre has, throughout history, taken place in a variety of 'expanded' spaces, but the newness of this particular expansion lies in the way in which a theatre event can take place while participants (both performers and spectators) are physically apart, in a situation of distribution. For this expansion to happen, new strategies that do not rely on physical presence are needed to engage audiences. Here the expansion of space is seen to impact the role of the audience. In article 6—but also in article 5, with the analysis of the performance *make-shift* (Jamieson and Crutchlow 2010)—I examine

practitioners' strategies for engaging the spectator when space is expanded, as is necessary for filling the expanded space with action.

6.3 The Role of the Audience

A theatrical convention that is significantly challenged by the development of different forms of engagement is the role of the audience. How is the role of the audience different from that of traditional forms of performance? What can the audience expect from a telematic performance, and what can practitioners expect the audience to be capable of accomplishing in a pervasive performance?

6.3.1 Split of the Audience: On-site and Online

In some telematic performances that incorporate online platforms in the performance event, it is possible for the audience to choose to be part of the event, either as an on-site audience or an online audience. An *on-site audience* refers to a group of individuals gathered together at a certain time and place to participate in a performance. An *online audience* refers to individuals who, separately and distributed, connect to a live performance event through the Internet, using a computer or mobile device.

Participation in either an on-site or online audience implies that the audience has been offered different forms of engagement, and has thus chosen according to how they want to participate. We are familiar with the conventions of a traditional on-site audience, which may be *spectator-as-viewer* or *spectator-as-agent*; but what are the challenges of online spectatorship?

In the analysis of telematic performance in article 5, I find that online audiences need to be continuously engaged through participation. This is because they lack the physical co-presence with the performers and other spectators that on-site audiences enjoy. Another reason may be that online participants lack the physical conventions of the performance event or frame. For example, online audiences do not have to follow the conventions of etiquette normally found in the theatre or at performances: they can dress as they please; they do not have to pay for a ticket (at least so far); they do not sit in designated areas together with other spectators but can sit anywhere they want; and they do not have to switch off their mobile phones or keep quiet as the performance starts. All these conventions mark the performance space as different from everyday life, and serve the purpose of separating it from the rest as a cultural activity. As online spectators lack these conventions that frame the

event as a performance, it is crucial for orchestrators to create in these spectators a sense of 'being part of a performance event'.

How, then, is the online audience engaged? First, the online audience participates in the performance through online actions that impact the live event. In article 5 and 6, I question the type of engagement that is offered to the spectator and argue that the goal is not to have the audience complete different tasks randomly— participation for participation's sake—but to make the audience feel that their participation contributes significantly to the making of the performance, and that it is vital and indispensable for the performance event to succeed. It is in this way that online participants stay engaged and refrain from trolling behaviour or leaving the event at any given time, as they feel responsible as co-creators of the event.

Second, the online audience needs to be treated equally to the on-site audience, and not as a secondary audience that supports the main one. In the analysis in article 5 of the performance *make-shift* (Jamieson and Crutchlow 2010), I show that it is crucial for both audiences to be treated equally, rather than one being prioritised over the other. In *make-shift*, the orchestrators alternated between engaging each audience: for example, there were moments when the on-site audience was performatively active while the online audience was busy filling in documents, so that there would be time for each group to process and digest the other group's contributions. Similarly, in the performance, there was a constant alternation between the audience being addressed. Although the orchestrators' focus on addressing each audience separately may have felt, at times, tedious and frustrating to the audience that was 'waiting' for its turn, this focus was ultimately necessary for achieving a balanced interaction, and making each audience member feel equally necessary in the performance as a whole.

Third, both audiences need to be interconnected through a shared purpose. In this way, the presence of the other audience is justified and a sense of co-creation is achieved. The danger here is that the two activities taking place—the performance, on the one hand, and the chat conversations, on the other—may happen independently, rather than in a connected way, which would cause the performance to fail at creating a collaboration that would take it further, and thus fail to provide the online audience with a sense of real co-creation.

There is still a lot to investigate on the issue of online audiences: how to engage them successfully, what they need and how they thrive. Thus, online

audiences are a viable topic for further exploration. So far, what we are able to know about online audiences is whether they are 'connected' to the performance platform and where they are located.[39] We also come to know them more personally through their participation in the performance. They normally get a nickname and perform actions that provide performers and other participants with information about who they are. In this way, we get to know them through their actions, rather than through data (i.e., IP addresses and geo-localisation coordinates). Combining these two sources of information, interactions and data, could be the next step for constructing an overview of the online audience.

6.3.2 Alternation of Roles During the Same Performance

In pervasive performances, a new dimension of the audience concept is the way in which the audience crosses conventional thresholds and experiences different participatory roles during one and the same event, going from spectator to player, theatre actor and documentalist. This is discussed in articles 2 and 3, and partly in article 6, using the case study of *Chain Reaction* (2009 and 2011) to represent the category of pervasive performance. In these articles, I argue that the on-site phase of the event focuses on embodied interaction, while the online phase of the event affords a level of mediation and a different understanding of the event by the same players through documentation. This is radically different from the audience experience described in the previous section, wherein the audience is split into two different groups of people that participate either as an on-site audience or an online audience.

This type of participation is varied. The positive side of it gives participants a sense of what each role 'feels like' and provides a richer, more multifaceted audience experience. The negative side of the crossing of roles in the course of one performance event is that it may not give enough time for participants to explore the intricacies of these new roles, since they might not be able to build a sense of expertise and are exposed to fast-paced, ephemeral experiences.

I also found that crossing different roles in a single performance event is positive, because it doesn't force participants to stay in a particular role in which they may not feel comfortable. For example, in *Chain Reaction*, some participants enjoyed the performance aspect more than the play aspect, and some players enjoyed the

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[39] It is becoming increasingly possible to track the IP addresses of online spectators. In this way, performers can gain access to information about spectators' locations and form a clearer map of who is participating.

social improvisation tasks (interacting with passers-by) more than the individual tasks; we also found the reverse: some participants did not enjoy the social improvisation tasks and preferred the individual tasks.

6.4 New Ways of Documenting Performance

The use of digital media in participatory performance events facilitates new ways of carrying out documentation that differ from traditional documentation conventions, wherein the documentation of performances lies exclusively in the hands of the authors/designers. Regardless of whether we are talking about a traditional play inside a theatre house or a participatory performance, spectators are generally instructed not to take pictures or videos, and they must refrain from reproducing the event to the public, according to the traditional guides of copyright law. However, as more nuanced forms of engagement are created and the role of the audience increases its weight and status as co-creator of the performance event, performance documentation is impacted. Digital media play an important role in affording the rise of the spectator as documentalist and the development of experiential archives.

6.4.1 The Appearance of a New Role: The Spectator as Documentalist

In my work with *Chain Reaction,* I found that launching the role of the documentalist was but one important contribution from the genre of pervasive performance, and this role could not have emerged without the inclusion of media in the genre. The transformation of the playing participant into documentalist challenges the conventional expectations of the audience, and expands the audience's role by allowing them to mediate and understand the event differently. As shown in the documentation of *Chain Reaction*, participants can, in this way, reflect on the live event *a posteriori*, interpreting it from a different perspective—understanding the event as a whole rather than as isolated mini-events; most importantly, they can construct a new creative product out of this reflection: a multimedia collage of their activities.

In the analysis of the documentation of *Chain Reaction* in article 3, I find that *player-led documentation* can have a good standard of quality—it can even be more elaborate than official documentation—when it is facilitated by the organisers. This argument is supported by today's digital media culture, in which documentation of everyday life is becoming an integrated part of our everyday activities (Jones 2008).

I found that the urge to document and display life for others is making people 'experts' in this type of documentation. So if we use that trend and apply it to performance documentation, we can use the participants as a workforce to document performances by making documentation a part of the event. The implication of this is that, if documentation keeps developing and becoming more complex, there will be no need for specialised documentalists if practitioners devise strategies to make documentation part of the performance event, because everyday, ordinary people show an aesthetic concern with documentation. Perhaps it is safer to say that the documentalist's job will change, with a view towards facilitation.

My research confirms that audience documentation is a promising field for development, which, together with the field of games, can create momentum for the sake of performance documentation.

6.4.2 Collaborative Archives

The incorporation of the audience into the documentation process also has an impact on the archives. In article 3, I use the case study of *Chain Reaction* to discuss alternative ways of constructing archives that incorporate audience documentation.

My experience with this incorporation is that it has the following positive implications: first, audience documentation adds a new type of documentation that was previously missing in the archive, which is *the subjective experiences of the spectators*; second, the documentation does not necessarily lower its quality, as it can reach a high standard and be as good as or better than the documentation that the author/designer can deliver; and third, incorporation of audience documentation extends the democratic ideal from participatory performance to its documentation.

From my analysis and discussion in articles 2 and 3, it follows that a way to encourage audience documentation is to make documentation part of the game mechanics by including it as part of the event.

The two challenges for audience documentation are as follows: First, setting the right framework for audience documentation to occur without documentation becoming the event, itself. By focusing on facilitating audience documentation, we risk the event losing its initial intention and becoming an event about documentation, only. The challenge here is to find a balance.

Second, finding a way in which designers' and participants' perspectives collaborate in the archive, as the juxtaposition of these two perspectives makes for a

richer archive. I found that in a situation where designers are 'context rather than content providers' (Kester 2004, 1) and participants are responsible for the creation of content, it becomes difficult to decide who is responsible for and who owns the documentation.

I found that a way to do this is to have participants document their own activities and to have designers do the same. Then, the divide between designers and spectators is dissolved and substituted by a different criterion: individual contributions to the performance. However, the rationale of documenting only one's own actions might seem limiting and old fashioned, reminiscent of a traditional understanding of ownership in the arts. In addition, documenting one's every action seems to be an exhausting task that audiences might not be interested in doing.

6.5 The Role of the Actor: Destabilising or Strengthening?

Another convention that is challenged by the incorporation of digital media on the stage is the role of the actor. Christopher Bauch (2005) argued that 'theatre histories have frequently presented the actor as being continuously challenged and possibly *threatened* by technology and its associated spectacle' (7, emphasis mine). If we look across the three categories in this study, how can we see the role of the actor to have been impacted by the proliferation of digital media?

In multimedia theatre, the debate focuses on the relationship between projections and real bodies. Here, Auslander claimed that 'if you have live bodies and projections on the same stage, most of the people are going to look at the projections' (Auslander 2005, 1). According to him, this is simply because the projected images are usually larger and brighter, and thus attract more attention (2005, 3). Carsten Stage's study on DIY[40] concert videos of Lady Gaga by concertgoers shows how the audience's centre of attention is the big screen and not the actual body of the live performer. He argued: 'This is due to the fact that the sense of liveness is often closely intertwined with a feeling of perceptual proximity. Without the big screen's visual closeness would not be an option for the concertgoers' filming, it is via the big screens (and the ability to zoom in on the events with the camera) that closeness and liveness can be created' (Stage 2012, 4).

The dominance of screens over bodies is agreed upon in other disciplines, as well, and not only in concert-like situations—which are large-scale events—but also

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[40] Do It Yourself (DIY) culture refers to user-generated products, be these digital or analogue.

in small spaces. For example, game designer Lau Korsgaard described how 'in contemporary console party games, everyone directs their attention to the TV, even though taking the attention away from the people at the party and putting it on a screen always seems "to some extent always a party killer"' (Fletcher 2012). In this sense, the relationship between the actor and the screen is one of competition for the audience's attention: a competition that screens seem to be winning. In some examples mentioned in article 6, in multimedia theatre, the actor has to share space with these new elements, but still holds a central position in the overall event. In other examples in the same article, the actor takes a secondary position, and the screens (or technological devices, for that matter) are prioritised. To illustrate the way in which the role of the actor takes a secondary position in multimedia theatre, I use an example mentioned in article 6, the piece of musical theatre *Ghost Road* (Murgia and Pauwels 2012). In the performance, an old woman stands onstage. She is the last inhabitant in a deserted village, a place once filled with life, which, because of the economic crisis in the area, was slowly abandoned. Projected on a large screen, stories of other inhabitants in similar situations are displayed, showing their routines and the reasons they were led to live at the margins of mainstream society.

The story of the onstage actor serves as a connecting thread to the projected stories, which outnumber the physical actor to the point that the onstage actor seems to be the only element that separates the performance from a documentary film. Towards the end of the performance, the onstage actor disappears and is substituted by a large screen that covers the entire stage, as we find in movie theatres, onto which a twenty-minute sequence of footage is projected. The projection shows an interview that the onstage actor conducted with a man living in one of the deserted places.

In *Ghost Road,* the number of stage actors is reduced to the minimum, while the number of mediated actors (and their stories) is augmented. Instead of using the stage and its elements to represent the story of these characters, Murgia preferred to present them directly onstage through the projections. One could argue that the use of video projections in *Ghost Road* responds to the intention of using video material to validate the interviews as real, rather than fictional, presenting real people. This connects, in fact, with the tradition of *documentary theatre*, in which it is common to 'present' real characters and stories rather than to fictionally 'represent' them onstage, using archived material such as interviews, documents, hearings, records, video, film and photographs as stage material (Martin 2012).

In the category of telematic performance, the role of the actor is strengthened. What I found from the comparative analysis between *ON LOVE* (2013) and *make-shift* (2012) in article 5 is that the *communication between the actors*—whether they were physically present or mediated through technology—is the central element of the performance and the focus of attention.

In multimedia theatre and telematic performance, the combination of screens and stage action forces a split of attention in the spectator, who must decide where to put his attention. But what do the projections show? As seen through the examples of *Ghost Road, ON LOVE* and *make-shift*, the projections mainly show 'other actors'. So, how do projections detract from the importance of the actor? Could this be read differently?

Carsten Stage claimed that mediation is a way of stressing the importance and more-than-normal character of what is mediated. He argued, 'when something extraordinary happens, you mediate' (2012, 3). Taking this claim to multimedia theatre and pervasive performance would mean that, if the actor were being mediated, this must be because she was an important element. In this sense, I would argue that the inclusion of screens and projections do not represent a threat to the actor, but rather enhance her figure as central. What is reduced, then, is the presence of 'live' actors, who are instead substituted by virtual, mediated ones. But the figure of the actor remains as central as it was; in fact, it is re-instated. As she is also the centre of the new added elements, the actor does not have to worry, since her presence is multiplied on the screens. Mediation is thus a brighter and larger way of getting to the audience that requires performers to use screen acting methods in addition to stage acting methods.[41]

The role of the actor in pervasive performance is partly discussed in article 2, in which I examine how the role of the audience can become more participatory thanks to a combination of game design, performance strategies and digital media. From the discussion of how the audience can be guided by the designers towards a more participatory position, it follows that the role of the actor has also been required

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[41] Bella Merlin (2010) compared 'film' and 'television acting' to 'stage acting', wherein the first two types consist of acting for the camera and the latter consists of acting for an audience. Some of the differences she listed relate to the way in which acting for the camera has a strange, discontinuous rhythm that oscillates between slow moments and intense ones, and how it focuses on details, precision and subtlety in performance, rather than larger moves that need to reach an auditorium.

to change towards becoming an orchestrator (or facilitator) for a playing audience. In articles 2 and 4, I locate this phenomenon—professional actors becoming orchestrators—within the category of pervasive performance, a genre that advocates authors becoming 'context providers' to an audience that fills artworks with content (Kester 2004, 1). This connects with the art tradition of art as heterogeneous works, created out of the collaboration between performers and spectators. From these discussions, I find that the actor's role is being relegated to a secondary position, to the benefit of the playing participant. This destabilisation is not necessarily detrimental to the role of the actor, but can be understood as an adjustment of her tasks.

An aspect that I found interesting to question was the extent to which the devices, themselves, are starting to be used to do the job that is normally done by the actors. The case study of *Rider Spoke* (2007) by Blast Theory is used in article 2, but I want to re-use it here to make a different point. In *Rider Spoke*, the designers installed a computer in a bike's handheld device holder as the communication tool between orchestrators and participants. To get started, an actor recorded a message on the computer that the participant activated and listened to. This is the message:

> This is one of those moments when you are on your own. You might feel a little odd at first, a bit self-conscious or a bit awkward. But you are all right and it's OK. You may feel invisible tonight but as you ride, this feeling will start to change. Relax, don't forget to breathe in and out and find somewhere that you like, it might be near a particular building or road junction, it might be near a mark on a wall or a reflection in a window. When you have found somewhere you like, give yourself a name and describe yourself. (Benford and Giannachi 2011, 183–4)

The message can be understood as what is normally seen as the script that is read to a spectator, rather than performed to an audience. The difference from a typical performance is that, while this script would traditionally have to be performed by an actor each time the event were to take place, the narration on the computer can be re-played an infinite number of times to distributed participants. The consequence is that the actor's task is reduced to recording a variety of messages in the device on only one occasion, independent from the number of times the event takes place. In this sense, the device takes away working hours from the actor, displacing her to a

secondary position—not only in terms of status in the performance, but also in terms of paid hours. In film, for example, actor's performances are re-played an infinite number of times through the recordings that are distributed globally, without this diminishing their status as central elements (or reducing their wages). It could be argued that, in fact, it is this re-playability that reinforces the relevance of the actor, as she reaches out to global audiences. In the performance field, however, given that the sector still makes its earnings through tours, the actor's status still pertains to rehearsal times and stage hours.

It could be argued that, even though *Rider Spoke* delivered the narrative and all instructions to participants through the bike's computer, the actors did not necessarily disappear entirely from the event. They were re-located to other organisational positions such as: a) greeting the participants on arrival; b) ensuring all the materials and devices were in place; c) solving problems that might arise during the performance; and, finally, d) receiving them at the end of their journey.

Even though the actor performed a variety of tasks during the whole performance, filling up the working hours, these tasks did not require acting skills, and could have been carried out by any person, even one who was not competent in the theatre field.

This is how the role of the professional actor is ultimately being destabilised: as the job of the actor is becoming orchestrational and orientated towards technical problem solving, the role of the actor—in these types of performances—is opening up to other types of professionals with competence in fields such as logistics and IT.

So, to what extent is acting a necessary skill? This, of course, depends on each performance and how much attention is put on the element of role play; however, it can safely be said that, in the category of pervasive performance, acting skills are being replaced by a new set of skills, that of orchestrating. The actor's role becomes one of facilitating non-actors performing in a public setting, together with other participants and actors. This type of event is close to a ritual understanding of *communitas* (Turner 1982), wherein orchestrators and the audience reverse roles in a safe and local, agreed upon environment. The role of the actor becomes more along the lines of a drama educator, who facilitates participants' creative expression.

6.6 From Scenography to Digital Scenography

The inclusion of digital media in the theatre stage has strongly impacted the conventions of scenography, in that digital elements such as screens and projections are pervading the stage in multiple ways, combined with stage action.[42] This is discussed in article 6, in which I examine the way in which digital media, in combination with stage action, have been used to 'expand' practitioners' vocabularies and space strategies to create and communicate meaning onstage in the category of multimedia theatre.

As the status of digital media onstage rises, so do the materials that support it. These can be small surfaces such as TV screens or projections; medium surfaces that cover parts of the stage; or large surfaces that either frame stage action (frontal projections) or serve as background (back projections).

I found that, in some cases, the surfaces on which digital media are projected onstage are used in combination with carpentry and purpose-built structures, as in the performance *Ghost Road* (2012). In other cases, they push the older elements aside, as in *The Andersen Project* (2006), in which we find an actor and projections only. In this way, digital media can be properly projected onstage without physical obstacles standing in the way of the projection.

Another reason for digital scenography to be proliferated onstage is economy. For example, Russian dramaturge and actor Oleg Liptsin argued in a post-performance talk with the artist that using domestic digital technology onstage reduces costs and thus makes other elements affordable. In his adaptation of Nicolai Gogol's *The Nose* (2010a), a low-tech, multimedia take on the classical Russian text, Liptsin connected an iPhone to a projector and manipulated it to project background images, photos and videos, creating a fluid, changing scenography. In addition, he was able to manipulate a pre-recorded video of himself and, in that way, incorporate another virtual character onstage (Bullock 2010). To Liptsin, the use of technology allowed him to stage the performance all by himself, and in this way save on material—scenography—and non-material resources—other actors (Liptsin 2010b).

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[42] Christensen-Scheel, Lindgren and Pettersen (2013) claimed that 'The contemporary theatre is changing, and part of that change is an appearance of more blurry division between the individual components within a performance'(126). They argued that, in such a situation, it is becoming increasingly difficult to define the role of the scenographer, whose job is 'revitalized' in some cases to a more central position, and blurred and deluded with dramaturgy in other cases.

Other productions that use more high-tech, sophisticated devices see their budgets increase due to the high costs of these technologies. However, it is difficult to tell if the use of digital devices in scenography necessarily increases or reduces production costs. On the one hand, there is the cost of the technology, itself. Projectors and screens are becoming widespread and domestic, and this has reduced their cost considerably. Of course, if one purchases the latest technology available, the cost is quite expensive. However, this does not mean that the digital solution is necessarily more expensive than traditional scenography. This is because, by using digital scenography, one reduces the production costs related to traditional purpose-built scenery: materials, technicians' working hours, time, etc. The benefit of digital scenography is that the digital devices provide endless possibilities inside a black box without any material costs (as the work is mainly done on the computer), to the point that many practitioners have started to ask the question: Why build it when you can project it?

This does not necessarily mean that digital scenography reduces work, but, rather, that the scenography work is done 'somewhere else' that might be less expensive and hazardous: the computer.

This suggests that it is necessary for the ensemble to include a role that masters the medium of video. From my own work as 'video artist' in the student production of *What Happened?* by Gertrude Stein, directed and adapted by Scott Wallis, a fellow graduate student, I found that this skill can be learned by the scenographer or can also be done by a video technician, who is not only in charge of the projection surfaces but is also in charge of designing content.[43] However, through my research in multimedia theatre, I also found that there are cases in which video artists—video specialists whose work is intended for gallery spaces and who do not usually work with theatre scenography—are hired to fill the projections with video, and in this way ensure the artistic quality of the projected images. An example of this is found in the performance *Ghost Road* (2012), mentioned in article 6, a performance

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[43] On 14 February 2014, the performance group The Wooster Group advertised a job opening for a video technician 'with experience in video for live performance, editing, production, streaming, and interactive programming'. The position was 'technical' and not conceptual, though the candidate would be required to 'collaborate on the development of video content for media and performance projects, design and install video systems, maintain inventories and equipment, and live mix video for performances locally and on tour internationally'. More information on the job post can be found here: http://contemporaryperformance.com/2014/02/14/opportunities-job-opening-at-the-wooster-group-video-technician-new-york/.

created out of the collaboration between the dramaturge Fabrice Murgia and the video artist Dominique Pauwels. In this new constellation, it is natural to include both names as creators of the performance on equal terms, which suggests a will to lift the status of the video artist within the theatrical context and equal it to the figure of the director/dramaturge.[44]

What ultimately determines whether digital scenography reduces production costs depends on each performance, and how resourcefully technology is used. What can safely be said is that, when digital devices enter the theatre stage, the older ways of creating scenography need to expand and make room for the new elements (the screens) and the new professionals.

6.7 New Ways of Rehearsing (?)

The inclusion of digital media generates new ways of rehearsing in multimedia theatre, telematic performance and pervasive performance. Even though this topic is not investigated throughout the articles *per se*, it grows from the research conducted in article 5, in which I discuss how digital media impact the role of the audience and the role of the spectator. Here I want to include an extended discussion, in which I present some insights that originate in that article.

In multimedia theatre, planning and pre-production experimentation are key to making the interaction between the projections and the stage action fall into place, as the actor, the scenographer and the video artist need to collaborate to create interesting interactions between the actor's performance and the video images, as well as the screen's materiality and location onstage (Giesekam 2007). In *Ghost Road* (2012), the example briefly discussed in article 6, the stage actor interacts with (talks to and interviews, to some extent) actors projected on the screens—an interaction that needs to be tightly choreographed in rehearsal. In some cases, these choreographed interactions aim at passing as if they were real. For example, a scene in *The Andersen Project* (2006) by Canadian director Robert Lepage shows how the main character, Frederic Lapointe, enters the Opera Garnier in Paris, projected in the background. As he starts climbing the stairs in the opera, the backstage projection begins to move (the image rotates), giving the illusion that Frederic is moving upwards and that the technology reacts to the actor's actions (and not the other way around). This is done

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[44] A current example is *Tristan and Isolda* (2004 and ongoing) by Richard Wagner, directed by Peter Sellars with video art by video artist Bill Viola.

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to create a sense of magic and technological wonder, following the rationale of the Shock and Awe aesthetic discussed in chapter 1, playing with the unresolved doubt of whether the projection and the actor's interaction is bi-directional or it is, in fact, choreographed. This way of rehearsing does not differ significantly from traditional rehearsal methods, as the work consists of a precise choreography of the interactions between the actor and a projection. However, the work seeks to imply that there is a direct communication between actor and machine, when in reality the communication is between actor and actor-machine (operated by a technician).

In telematic performance, we find a similar situation in the pieces that present a pre-planned performance. However, in this genre, achieving a sense of responsiveness is much harder than in multimedia theatre, due to the changing delay that makes this tight interaction almost impossible. For this reason, telematic performance tends to display the connection of remote partners (in a theatrical manner) and improvise the interactions. In article 5, I point to how the focus of this category lies in the interaction between actors, the live and the remote. The rehearsal method differs from traditional rehearsal methods in that the actors are not physically present in the same location. Having the telematic technology in place and working is fundamental for rehearsals to be able to take place, and this adds a number of people who need to meet up for rehearsal (in high-tech performances), relative to traditional rehearsals, in which actors do not need to have the theatre machine in place to rehearse their parts. As telematic technology is still not reliable in a technical sense, rehearsing may be a difficult and frustrating task due to the technical difficulties that need to be overcome.[45]

In pervasive performance, ways of rehearsing differ from traditional rehearsal methods for the stage, but they do not differ so much from the methods used in improvisation, in which actors have to prepare and 'envision' the different ways in which audience contributions may happen. However, as pervasive performance frames events as games, rehearsal methods from games are used in combination with traditional rehearsal methods. In articles 1 and 2, I describe how I used the game rehearsal method of the playtest to refine and adjust the *Chain Reaction* events. Playtests differ from traditional rehearsal methods in that changes and adjustments are

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[45] Erik Geelhoed claimed that the purpose of telematic technologists is to make the technology 'transparent'. He argued that this is very important, because, currently, artists spend all their energies trying to 'connect to each other' so that when they finally manage to connect, they are exhausted and frustrated (Geelhoed 2013b).

made according to participants' feedback and designers' observations (Fullerton 2014). Here lies the newness of this rehearsal method: as participants are in charge of filling the events with content, their opinions need to be carefully taken into account when the events are designed, as in game design. It is not enough to have the designers, themselves, be the playtesters (often this is the first playtest of many to be carried out); rather, there need to be playtests with players external to the design team, so that a productive, critical distance can make room for significant changes. This means that rehearsals are not only carried out by performers to improve and adjust a performance, but they are also carried out by both orchestrators and participants. The implications of this, compared to the convention of rehearsal, is that rehearsal is done collaboratively, closer to the method of *devising*, wherein a group of people generates a performance through collaborative, usually improvisatory, methods; this differs from the more traditional method of rehearsal.

6.8 What Exactly is New?

Once I have laid out the conventions challenged in the complex field of digital performance, I shall question whether these very same conventions have been challenged similarly earlier in history by theatre and performance means. In the history of theatre and performance, do we find practices that have aimed at challenging these conventions, but without the technology? By answering this question, I will be able to bring forward the extent to which the challenges and affordances posed by digital media to contemporary performance are fundamentally new.

CONVENTIONS CHALLENGED THROUGH DIGITAL MEDIA TODAY	THEATRE AND PERFORMANCE FORMS THAT ALSO HAVE CHALLENGED THE SAME CONVENTIONS
• Expansion of space	• Site-specific performance
• The role of the audience: the participatory turn	• Improvisation • Theatresports • Happenings • Fluxus • Relational Art • Community theatre • Theatre of the Oppressed
• Documentation	?
• Role of the actor: acquiring new skills	• Documentary theatre • Puppet theatre • Shadow theatre
• Digital scenography	• Gas lighting
• Playtesting as a new paradigm for rehearsal	?

A theatre and performance form that does not require the use of technology for performance-making in public space is site-specific performance. As I explained in the historical contextualisation of *Chain Reaction* in chapter 2, site-specific performance aims at constructing an organic and productive dialogue between a site and a performance, in an appropriation of public space. Site-specific performance such as community theatre and many applied theatre forms has developed a variety of performance strategies to incorporate public space in performance and, vice-versa, to imprint/intervene/disrupt/enhance public space in ways similar to those used in pervasive performance. For this, no technology is necessary, since public space

provides the necessary materials for performance-making. It could then be argued that technology is not really necessary when performance strategies can draw attention to the aesthetic potential of public space. However, site-specific performance still works with the co-presence of actors and spectators (in public space), and does not allow for the physical distribution between them in the way that pervasive performance affords. Here we find a quality of pervasive performance that site-specific performance does not have, and which digital media provide: a tool that creates presence when there is no physical proximity. For performance, this means that digital media allow us to create a sense of community in a performance while being physically apart, by devising strategies mediated by technology. In articles 5 and 6, I explore some of these strategies, which I describe as being generally concerned with instructing spectators to 'do' something through words or actions. It could be argued that audience participation in mediated performance is a result of the expansion of space, and that, in trying to expand the convention of space, we are, as a consequence, having to also develop other strategies to 'cover up' for these challenges. I believe that new strategies for bridging physical distribution will be developed in the future, and that we are now starting to explore different ways of including expanded theatre spaces in a single live performance event.

Do we know historical theatre and performance forms that have aimed at fostering audience participation, inviting them to co-create the performance or even create events with only a playing audience? The modernist's aim is that of the democratisation of the arts by inviting the everyday man into the production mechanisms of artworks and processes. In chapter 2, I explained how this discourse manifested itself in the experimental forms of the avant-garde. Improvisation, Theatresports, the Happenings and Fluxus were artforms that connected to the frameworks of 'play' and 'game' to facilitate audience participation, or rather to turn the audience into players, staging themselves. And then applied theatre—more specifically the forms of community theatre and the Theatre of the Oppressed—aimed at turning spectators into Spect-Actors to foster social change and improve the lives of people through theatre.

All these theatre forms have invited the audience to co-create artworks in different ways, creating strategies that foster all kinds of participation, from the light-weighted improvisation 'audience request system' to the much more demanding community theatre participation in which amateurs and professionals jointly devise a

performance during weeks of rehearsal to create a sense of community through the process. This implies that technology, *per se*, is not necessary for generating participation, but the strategies are fundamental. This is extensively discussed in article 2, in which I use the case of *Chain Reaction* to analyse the extent to which ubiquitous media foster participation. I conclude that it is not the technology, but the combination of game and theatre that facilitates participation, mainly because it lowers the threshold of participation by substituting the conventions of theatre with the conventions of games.

The way in which technology adds a level of participation when applied to performance is in its attraction of new audiences to the theatre who are interested in technological devices *per se*. These audiences are fascinated by the creative possibilities of everyday technologies and therefore come to the theatre to see and experience the way in which these technologies are put to another use than the ones they were initially designed for.

When thinking about the rise of the spectator as a documentalist and the breakthrough of documentation as a site for creative expression, I did not find previous theatre or performance forms in which documentation's aesthetic potential had been made part of the artistic event or in which participants had been asked to creatively document as a form of expression in itself.

Related forms can be found in applied educational theatre, in which documentation can be used as a starting point for inspiring a performance, or it can also be used as a topic. Another theatre form in which documentation is crucial is documentary theatre. Defined by Carol Martin as 'created from a specific body of archived material: interviews, documents, hearings, records, video, film, photographs, etc' (C. Martin 2006, 9), documentary theatre uses documentation to stage history, or at least the history that has been recorded in the archive. The archive becomes central to performance: documentation of things past, prior to the performance. This is very different from the documentation I have presented here, which is a documentation of the present that serves two purposes: allowing the participants to reflect on the performance, itself, and providing a new site for creative expression through multimedia composition. Finally, we find conventional approaches to performance documentation: performance documented by an archivist for archival purposes, or for advertisement of the performance in the future.

None of these practices considers the documentation *per se* as having aesthetic potential, but instead thinks of documentation as something to be used either for performance-making (as inspiration) or for archive or research after the performance. The launch of the role of the documentalist was but one important contribution from the genre of pervasive performance, and this role could not have emerged without the inclusion of media in the genre. It is thanks to ubiquitous media that the participant is given the opportunity of first capturing the event with her camera, then mediating and understanding the event differently by creatively composing its documentation online. The documentalist resembles Boal's Spect-Actor in that she engages in moments of action during the performance and moments of reflection later from home, when she is composing her story. In this sense, the documentalist can be understood as a mediated Spect-Actor.

When it comes to the transformation of the role of the actor, have theatre and performance forms in the past forced the actor to share the stage with (older) technologies? Also, has it happened earlier that the inclusion of technology has implied a shift of work duties towards more logistic skills? Sharing the stage with other devices has always happened in the theatre, but with other technologies. Puppet theatre, for instance, puts puppets at the centre of the stage, and obliges actors to take a secondary position. Actors work in the performance by giving their voices and moving the puppets, even though their physical bodies are, to some extent, hidden from the eyes of the spectators. Shadow theatre is another example; here, the actors either operate devices that project shadows—and they therefore need to carefully stay out of the projecting areas—or they use their bodies to project different forms. Also in this genre, the actor's job is to interact with devices more than to display herself onstage.

In community theatre, for example, the role of the actor/director is to guide amateurs into performance-making; and in the Theatre of the Oppressed, the role of the actors is to support the actions of the Spect-Actor through improvisation onstage. In documentary theatre, which has become common practice to stage non-actors, individuals who have experienced the historical events are presented onstage 'first hand' in order to generate a sense of reality onstage. This is part of a strategy that seeks to 'present', rather than 'represent', the world onstage (Forberg and Frandsen 2013).

All these theatre forms have previously understood that the character should be relegated to a secondary position, and the actor should be the central figure onstage. Technology does not change this, except that the actor needs competence in the technology used to be able to communicate it and teach it to others.

When thinking about digital technologies substituting older technologies, we see a clear shift with the introduction of gas lighting at the end of the eighteenth century and beginning of the nineteenth century. This resulted in a significant impact of over half a century of experimentation with dimming, blending and colouring light on the nineteenth century stage. Inspired by this, it can be argued that digital media impact forms onstage in the same way in which gas lighting once did. Similarly, much as theatre professionals developed the necessary skills to explore this new situation, so too must theatre professionals today recycle skills and learn to operate the technologies of today.

And finally, are there previous theatre forms in which the creative method included the audience from the beginning of the process? We may find similarities with the genre of devised theatre. As Haagensen (2014, 18) wrote: 'Devising can be explained as a way of creating performances based on the participant's ideas, desires and preferences. In a devising process, the performers draw extensively on their own experiences as lifeworlds, since there are no pre-written manuscripts before the project starts. In this way, every devised performance is a sharing and showing of the perspectives and experiences of the persons involved; their aesthetic preferences, their content creations and their collaborative process'.

The creative process in devised theatre legitimises participants' ideas, experiences and opinions as source materials for art-making. It follows a democratic aesthetic wherein all participants become creators/players. However, in devised theatre, the process of devising is limited to a group of actors and does not include the audience. In addition, when it comes to showing the devised performance to an audience, the event usually follows a traditional set-up with a division between performers and an audience that comes from the outside.

In playtesting, the audience is invited to contribute to co-designing the event through their feedback before the event premieres, as part of the creative process. The invited playtesters test the game through playing it, then provide feedback to the designers on different aspects of the game, from the technology, itself, to rules, obstacles, gameplay, locations and so forth. This feedback builds on their subjective

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experiences, ideas, desires and preferences, using the same materials that actors build on to create a performance in devised theatre. The newness of playtesting lies in its use as a rehearsal method in participatory art works. This is a new paradigm for the creation of participatory performance, a new way of rehearsing, but it is important to note that this an appropriation of a method from the field of game design (which contains technology) rather than a contribution from the field of digital media.

Chapter 7: Concluding Remarks

7.1 Conclusions

Through this research project, I investigated the ways in which digital media challenge and reconfigure traditional conventions in contemporary performance. To answer this question, I defined three large categories that mark the heterogeneity of the field of digital performances: multimedia theatre, telematic performance and pervasive performance. I then applied a hermeneutical approach not only in performance analyses of a variety of technologically enhanced artworks, but also as an integrated part of research through practice in the performance experiment of *Chain Reaction*. The insights from this process allowed me to draw the following conclusions.

First, the application of digital media to performance today results in a computer aesthetic being replicated in dramatic forms. This can be seen in the proliferation of visual language onstage, but most importantly in the proliferation of alternative and nuanced strategies for active engagement in the audience, where participation and *produsage* are central.

Second, the use of media impacts the conventional role of the audience in that they are offered ways to 'attend' a performance that differ from traditional manners of attendance. In telematic performance, audiences are able to attend a performance remotely, connecting through online platforms. In pervasive performance, they are able to be partly co-present with other spectators and performers, as in a traditional performance event, and partly distributed in public space. In this new genre, the audience's experience becomes richer and more multifaceted, crossing conventional thresholds and allowing members to play different participatory roles during one and the same event, going from spectator to player, theatre actor and documentalist.

Third, media allow for alternative ways of documenting performance, wherein the audience is integrated in the process. The impact of this development is two fold.

First, documentation can become part of the aesthetic event, and second, it becomes possible to construct archives that combine and juxtapose audience experiences with designers' accounts, and thus create richer archives out of the collaboration between designers and participants.

Fourth, the application of media to performance-making impacts the role of the actor in that she is often either mediated or has to learn the skill of interacting with media (whether the media in question are screens and projections, teleimmersion systems or mobile phones). Even though it would initially seem that her role is relegated to a secondary position, the reality is that her figure remains central to the performance event. In the case of pervasive performance, her role changes slightly, as she becomes more of an orchestrator or facilitator of audiences at play.

Fifth, the impact of digital media on scenographic conventions rests in the expansion of the materials used on stage, from analogue (carpentry and so on) to digital. When digital devices enter the theatre stage, the older ways of creating scenography are expanded and adjusted in order to make room for new elements (the screens) and professionals (video technicians and video artists).

Sixth, the application of digital media to performance results in slightly different ways of rehearsing. In performances relying on a Shock and Awe aesthetic, much focus is on the orchestration of precise interactions between stage action and digital media. In the category of pervasive performance, rehearsal methods from theatre are mixed with methods used in game design (playtests); this results in the appearance of a new hybrid method that resembles that of devised theatre (in which performance is fashioned out of the creative collaboration between orchestrators and participants).

After cross-referencing these conventions with those of previous theatre and performance forms that have been challenged in similar ways, but without the use of media, it becomes clear that the conventions that technology allows us to break are reduced to the following.

First, the expansion of theatrical space: being together while being apart. As this expansion of space provokes a physical gap between performers and spectators, new strategies of mediation are generated in order to create a sense of togetherness that relies on digital communication.

Second, documentation as part of the aesthetic event and the inclusion of first-person experiences of artworks as part of the archive.

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Third, the rise of playtesting as part of the creative method in participatory art practices as a way of letting the impulses of the audience in before the artwork is presented to the public.

Having said this, media also allow us to preserve certain conventions in performance-making and reception. When digital media are used onstage, they become just another element in a dramaturgical composition, used in the same way as other stage elements (though with new strategies). The newness of the digital material does not significantly change the role of the performers, who remain as central figures or the role of the spectators, who also remain as 'spectators as viewers'.

To the second set of research questions posed at the beginning of this study— that is, to what extent the use of media benefits or disrupts aesthetic expression—my research shows that, although media are essential elements in these performance forms, they are still instrumental and need to be used for an artistic purpose. The use of media technology benefits aesthetic expression when it is integrated conceptually into performance works, and it disrupts aesthetic expression when it is merely added to the performance, causing the performance, as well as the media elements, to fall short of their full potential. In other words, using technology for technology's own sake does not suffice as an aesthetic strategy.

And finally, to the question of how performance can contribute to a better understanding of the use of digital media, my analyses in article 4 show that enhancing the performative and the social aspects in media provides infinite possibilities, more so than media alone can generate.

7.2 Implications of the Research

This research project examined the ways in which digital media impact the field of contemporary performance by challenging its conventions. I analysed performances in which performers and spectators were not physically co-present, but were distributed in public space. I examined performances in which the performers were mediated onto the stage rather than physically present, and performances in which the spectators were physically absent from the live performance venue and interacted with the live event through text chats. In order to account for these new types of performance, existing definitions of performance events as 'co-constructed by the bodily presence of both actors and spectators, generated and determined by a self-referential and ever-changing feedback loop' (Fischer-Lichte 2008, 38) may need to

be expanded. The self-referential and ever-changing feedback loop is not always generated and determined by the bodily presence of both actors and spectators, but rather by the meaningful connection between them. In other words, it is not always about being physically together in the same place at the same time, but about being able to carry out an activity in an environment, about 'doing something together' across differing physicalities, space and even time.

Through the research project, I helped to map a field that, at present, is not well-researched due to its contemporaneity and the transient nature of the technologies applied. Though I am aware that the forms I studied might be ephemeral occurrences that will perhaps not even exist in the future, I believe that this study will contribute to the understanding of some of the changes that technology poses to the arts at this time in history.

I identified new performance forms and new objects for study at the convergence of art and technology. Here, I have shown the relevance of combining media and performance studies when studying contemporary performance that applies digital media. According to my research, the inclusion of digital media forces a reconfiguration of aesthetic strategies in performance: new ways of creating performance and engaging with performance start to be generated, and labour around these forms is re-structured. In my understanding, this means the generation of new art forms that need to be addressed as such.

7.3 Future Research

During my research process, I had to leave a number of interesting questions unexplored, due to time constraints. If I were to follow up on this project, the following could be topics for further research: contextual conventions, online audiences and the blurring of aesthetics with social space. As I mentioned in the introduction, when describing the state of the art, while I investigated the challenge posed by digital media to aesthetic conventions that revolve around the performance event, I found that there are also contextual kinds of conventions—forms of labour in the theatre and performance profession—that are impacted in the production of digital performance. This is because most performance professionals are not trained in technology and do not have access to the necessary funding for purchasing it (which is generally expensive), and so they come up with various ways of overcoming such a lack of competence and resources (Auslander 2005). The experience I gained during

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the course of this research project suggests that there are two main ways in which practitioners compensate for the lack of technological competence and resources. First, through re-structuring the theatre roles within the ensemble; and second, by outsourcing technology through allying themselves with agents outside of the performance world. The former can be done by: a) expanding the role of the artistic director to incorporate digital media on a conceptual, rather than technical, level from the start; b) expanding the role of the technician to take part in the conceptual design; and c) including a new role in the ensemble: for example, a trained specialist in the technology to be used who, together with the artistic director, devises the piece conceptually from beginning to end. The latter can be accomplished by partnering up with private industry and/or with the science department within the frame of the university. Here, in the interaction between art and technology via interdisciplinary collaborations, there are economic, aesthetic and technical interests that collide/interact, and which may influence the results. It is necessary to examine the interaction between disciplines and the way in which these collisions may create obstacles—not on the individual agents but on the overarching context.

The second topic that could use more investigation is the online audience: How do we engage the online spectator successfully? What do they need? How do they thrive? For now, I would like to tentatively suggest three hypotheses: First, that the online spectator is engaged through activity, rather than through observation alone. Second, that her participation is perceived as meaningful when it has a visible impact on the performance event. And third, that her status is lifted and considered on equal terms to the physical, live audience—that she feels addressed and taken care of by the art work. These are insights from my thesis work that could be used as first steps in a future investigation. If online environments are to increasingly become integrated into live performances, new strategies to accommodate online spectators must be invented and created.

The third topic that would be interesting to explore further is the blurring of aesthetic and social spaces. For example, an emergent body of artworks is being purposely designed 'to unfold in the background of participants' daily life' (Benford and Giannachi 2009, 444). This blurring is becoming a desired quality of these works, as 'the inter-relationship between social life and entertainment respects the flexibility, anonymity and creativity of dispersed and mobile subjects' (2009, 447). Such an

investigation could be understood as an expansion of this thesis, as it would examine the impact of new performance forms to society as a whole.

Bibliography

Aaltonen, Heli and Bruun, Ellen Foyn. "Practice as Research in Drama and Theatre: Introducing Narrative Supervision Methodology". In *InFormation: Nordic Journal of Art and Research* 3 (2014): 52-68.

Aarseth, Espen. *Cybertext: Perspectives on Ergodic Literature*. Baltimore, MD: Johns Hopkins University Press, 1997.

———. "Game Studies, Year One." *Game Studies* 1 (2001). Accessed February 28, 2014. http://gamestudies.org/0101/editorial.html.

———. "We All Want to Change the World: The Ideology of Innovation in Digital Media." In *Digital Media Revisited: Theoretical and Conceptual Innovation in Digital Domains*, edited by Gunnar Liestøl, Andrew Morrison, and Terje Rasmussen, 415–40. Cambridge, MA: MIT Press, 2004.

Abrahams, Annie. *ON LOVE*. Performance, 2013. Accessed January 25, 2014. http://www.bram.org/onLove/index.html.

Adams, Matt. "Mixed Reality Arts." In *Pervasive Games: Theory and Design*, edited by Markus Montola, Jaakko Stenros, and Annika Waern, 236–40. USA: Morgan Kaufmann Publishers, 2009.

Anderson, CW. "From Indymedia to Demand Media: Journalism's Visions of its Audience and the Horizons of Democracy." In *The Social Media Reader*, edited by M. Mandiberg. New York: New York University Press, 2012.

Appelbaum, Peter. *Multicutural and Diversity Education*. California: Contemporary Education Issues, 2002.

Artaud, Antonin. *The Theatre and its Double*. Translated by Victor Corti. London: Oneworld Classics, 2010.

Auslander, Philip. *Liveness: Performance in a Mediatized Culture*. 2nd ed. New York: Routledge, 1999.

———. "After Liveness: An E-Interview," 2005. Accessed February 20, 2014. http://lmc.gatech.edu/~auslander/interviews/Performance%20Paradigm%20Interview.pdf.

———. "The Performativity of Performance Documentation." *PAJ* 84 (2006): 1–10.

Austin, John L. *How to Do Things with Words*. Great Britain: Oxford University Press, 1962.

Balkin, Jack M. "Digital Speech and Democratic Culture: A Theory of Freedom of Expression." *Faculty Scholarship Series* 240 (2004): 1–55.

Balme, Christopher. "Distributed Aesthetics: Performance, Media and the Public Sphere." In *Blending Media*, edited by Jerzy Limon. Gdańsk: Theatrum Gedanense Foundation, 2010.

———. *The Theatrical Public Sphere*. Cambridge: Cambridge University Press, 2014.

Bauch, Christopher. *Theatre, Performance and Technology*. UK: Palgrave MacMillan, 2005.

Benford, Steve, Andy Crabtree, Martin Flintham, Adam Drozd, Robert Anastasi, Mark Paxton, Nick Tandavanitj, Matt Adams, and Ju Row-Farr. "Can You See Me Now?" *ACM Transactions on Computer-Human Interaction* (*TOCHI*) 13 (2006): 100–33.

Benford, Steve, Mike Fraser, Gail Reynard, Boriana Koleva, and Adam Drozd. "Staging and Evaluating Public Performances as an Approach to CVE Research." *CV2 ´02 Proceedings* (2002), 80–7. Bonn, Germany: ACM Digital Library.

Benford, Steve and Gabriella Giannachi. "Temporal Convergence in Shared Networked Narratives: The Case of Blast Theory's Day of the Figurines." *Leonardo. Project Muse* 42 (2009): 443–8.

———. *Performing Mixed Reality*. Cambridge, MA: MIT Press, 2011.

Berg, Ine Therese. "Perspektiver På Multimedial Scenekunst: Moster Teater?". MA diss., University of Oslo, 2005.

Berghaus, Günter. *Avant-Garde Performance: Live Events and Electronic Technologies*. Basingstoke: Palgrave Macmillan, 2005.

Bernat, Bernat. *Dominio Público*. Theater, 2008. Accessed February 10, 2014. http://rogerbernat.info/en-gira/domini-public/.

Bernat, Roger. *The Rite of Spring*. Theater, 2010. Accessed March 15, 2014. http://rogerbernat.info/en/.

Biggs, Michael. and Büchler. Daniela. "Rigor and Practice-Based Research." *Design Issues* 23 (2007): 62–9.

Biggs, Michael and Büchler, Daniela. (2011). "Communities, Values, Conventions and Actions". In M. Biggs & H. Karlsson (Eds.). *The Routledge Companion to Research in the Arts.* London & New York: Routledge (2011): 82-98.

Birch, Anna and Joanne Tompkins. *Performing Site-Specific Theatre*. Basingstoke: Palgrave Macmillan, 2012.

Birringer, Johannes. *Performance on the Edge: Transformations of Culture*. London: Athlones Press, 2000.

———. *Ukiyo*. Telematic dance, 2010. Accessed February 28, 2014. http://www.iapl.info/_conferencehistory/IAPL_2009/MainConferencePages/Ukiyo.htm.

Bishop, Claire. *Participation*. Cambridge, MA: MIT Press, 2006.

———. *Artificial Hells: Participatory Art and the Politics of Spectatorship*. London: Verso, 2012.

Blast Theory. *Can You See Me Now?*. Performance, 2001. Accessed April 13, 2014. http://www.blasttheory.co.uk/bt/work_cysmn.html.

———. *Rider Spoke*. Performance, 2007. Accessed April 13, 2014. http://www.blasttheory.co.uk/bt/work_rider_spoke.html.

Boal, Augusto. *Theatre of the Oppressed*. Translated by Charles A. McBride, Maria-Odilia Leal McBride, and Emily Fryer. London: Pluto, 2008.

Bogost, Ian. *Persuasive Games. The Expressive Power of Videogames*. Cambridge, MA: MIT Press, 2007.

Bogost, Ian and Jane E. McGonigal. *Cruel 2 B Kind*. Game, 2006. Accessed April 7, 2014. www.cruelgame.com.

Bolter, Jay David. "Theory and Practice in New Media Studies." In *Digital Media Revisited: Theoretical and Conceptual Innovation in Digital Domains*, edited by Morrison, Gunnar Liestøl and Terje Rasmussen, 15–34. Cambridge, MA: MIT Press, 2003.

Bolter, Jay David and Richard Grusin. *Remediation: Understanding New Media*. Cambridge, MA: MIT Press, 2000.

Borgdorff, Henk. "The Debate of Research in the Arts." *Dutch Journal of Music Theory* 12 (2007): 1–17.

———. "The Conflict of the Faculties: Perspectives on Artistic Research and Academia." Leiden, 2012.

Bourriaud, Nicolas. *Relational Aesthetics*. Dijon: Les Presses du Réel, 1998.

Brette, Olivier. "Thorstein Veblen's Theory of Institutional Change: Beyond Technological Determinism." *European Journal of the History of Economic Thought* 10 (2003): 455–77.

Brook, Peter. *The Empty Space*. London: Penguin, 1968.

Bruns, Axel. *Blogs, Wikipedia, Second Life, and Beyond. From Production to Produsage*. New York: Peter Lang, 2008.

Bullock, Ken. "An Innovative Take on Gogol's 'The Nose'." *The Berkeley Daily Planet*, January 14, 2010. Accessed May 23, 2012. http://www.berkeleydailyplanet.com/issue/2010-01-14/article/34479?headline=An-Innovative-Take-on-Gogol-s-The-Nose---By-Ken-Bullock-Special-to-the-Planet.

Butler, Judith. *Gender Trouble*. New York: Routledge, 1990.

———. *Excitable Speech: A Politics of the Performative*. New York: Routledge, 1997.

Caillois, Roger. "The Definiton of Play and The Classification of Games." In *The Game Design Reader*, edited by Katie Salen and Eric Zimmerman, 122–55. Cambridge, MA: MIT Press, 2006.

Castells, Manuel. *The Rise of the Network Society*. 2nd ed. UK: Wiley-Blackwell, 2010.

Castells, Manuel, Mireia Fernández-Ardèvol, Jack Linchuan Qiu, and Araba Sey. *Mobile Communication and Society*. Cambridge, MA: MIT Press, 2007.

Causey, Matthew. *Theatre and Performance in Digital Culture: From Simulation to Embeddedness*. London: Routledge, 2006.

Chamberlain, Alan, Duncan Rowland, Jonathan Foster, and Gabriella Giannachi. "Riders Have Spoken: Replaying and Archiving Pervasive Performances." *Leonardo Transactions* 43 (2010): 90–1.

Chapple, Freda and Chiel Kattenbelt, eds. *Intermediality in Theatre and Performance*. Amsterdam: Rodopi, 2006.

Christensen-Scheel, Boel, Christina Lindgren, and Anette Therese Pettersen. "Scenography in the Staging / on the Stage / in the Mind of the Audience." *Performance Research* 18 (2013): 126–34.

Company in Space. *Scape Velocity*. Performance, 2000. Accessed April 13, 2014. http://www.companyinspace.com/.

Corrigan, Robert Willoughby. *The World of the Theatre*. 2nd ed. Bubuque, IA: Wm. C. Brown, 1992.

Daniels, Dieter and Barbara U. Schmidt, eds. *Artists as Inventors, Inventors as Artists*. Hatje Cantz, 2008.

Dean, Roger T. and Hazel Smith, eds. *Practice-Led Research, Research-Led Practice in the Creative Arts*. Edinburgh: Edinburgh University Press, 2009.

Debord, Guy. "Theory of the Derivè." In *Visual Culture*, edited by Joanne Morra and Marquad Smith, New York: Routledge, 2006: 77–81.

Delgado, Maria M. and Paul Heritage, eds. *In Contact with the Gods? Directors Talk Theatre*. Manchester: Manchester University Press, 1996.

Denzin, Norman K. *Performance Ethnography: Critical Pedagogy and the Politics of Culture*. Thousand Oaks, CA: Sage, 2003.

Depocas, Alain. *Digital Preservation: Recording the Recording – the Documentary Strategy*. Canada: Daniel Langlois Foundation, 2002. Accessed June 23, 2014. http://www.fondation-langlois.org/html/e/page.php?NumPage=152.

Depocas, Alain, Jon Ippolito, and Caitlin Jones. *Permanence Through Change: The Variable Media Approach*. New York: Guggenheim Museum Publications, 2003.

Deterding, S. "Pawned. Gamification and Its Discontents." 2010. Accessed July 3, 2012. http://www.slideshare.net/dings/pawned-gamification-and-its-discontents.

Deterding, S., K. O'Hara, Miguel Sicart, D. Dixon, and L. Nacke. "Using Game Design Elements in Non-Gaming Contexts." 2011.

Dewey, John. *Art as Experience*. New York: Berkeley Publisher Group, 1934.

Dixon, Steve. "Digits, Discourse, and Documentation: Performance Research and Hypermedia." *The Drama Review* 43 (1999): 152–75.

———. *Digital Performance: A History of New Media in Theater, Dance, Performance Art, and Installation*. Cambridge, MA: MIT Press, 2007.

Fischer-Lichte, Erika. *The Semiotics of Theatre*. Indiana: Indiana University Press, 1992.

———. *The Transformative Power of Performance: A New Aesthetics*. Translated by Saskya Iris Jain. London: Routledge, 2008.

Fletcher, JC. "How 'Spin the Bottle' Explores Wii U's Social Potential." *Interview to Lau Korsgaard*, December 26, 2012. Accessed January 20, 2013. http://www.joystiq.com/2012/12/26/how-spin-the-bottle-explores-wii-us-social-potential/.

Forberg, Siri and Miriam Frandsen, eds. *Monsters of Reality*. Lavtia: Livonia Print, 2013.

Foreman, Kathleen and Clem Martini. *Something Like a Drug: An Unauthorized Oral History of Theatresports*. Alberta: Red Deer College Press, 1995.

Freeman, John. *Tracing the Footprints*. New York: University Press of America, 2003.

———. *Blood, Sweat & Theory*. Oxfordshire: Libri Pub, 2010.

Frost, Anthony and Ralph Yarrow. *Improvisation in Drama*. Basingstoke: Palgrave MacMillan, 2007.

Fullerton, Tracy. *Game Design Workshop: A Playcentric Approach to Creating Innovative Games*. 3rd ed. Boca Raton, FL: CRC Press, 2014.

Gardner, Lyn. "Should Theatre Leave More to the Imagination?" *The Guardian*, January 16, 2012. Accessed August 7, 2014. http://www.theguardian.com/stage/theatreblog/2012/jan/16/theatre-more-imagination-animation.

———. "Does Digital Technology Help Theatre – or Hinder It?" *The Guardian*, August 19, 2013. Accessed August 7, 2014. http://www.theguardian.com/stage/theatreblog/2013/aug/19/digital-technology-help-theatre.

———. "Why Digital Theatre Poses No Threat to Live Performance." *The Guardian*, January 17, 2014. Accessed August 7, 2014. http://www.theguardian.com/stage/theatreblog/2014/jan/17/digital-theatre-live-performance-stream-nt-broadcasts.

Geelhoed, Erik. "User Requirements in Immersive Mediated Performance Spaces." Presented at the Remote Encounters Conference, Cardiff, April 12, 2013a. http://remote-encounters.tumblr.com/schedule.

———. "About Remote Encounters Conference," August 5, 2013b.

Giannachi, Gabriella. 2004. *Virtual Theatres: An Introduction*. London: Routledge.

Giannachi, Gabriella, Henry Lowood, Glen Worthey, Dominic Price, Duncan Rowland, and Steve Benford. "Documenting Mixed Reality Performance: The Case of CloudPad." *Digital Creativity* 2012, 1–17.

Giannachi, Gabriella, Duncan Rowland, Steve Bendford, Jonathan Foster, Matt Adams, and Alan Chamberlain. "Blast Theory's Rider Spoke, its Documentation and the Making of its Replay Archive." *Contemporary Theatre Review, Taylor & Francis* 20 (2010): 353–67.

Giesekam, Greg. *Staging the Screen: The Use of Film and Video in Theatre*. New York: Palgrave MacMillan, 2007.

Gladwell, Malcolm. "Small Change." *New Yorker*, October 4, 2010. Accessed September 17, 2014. http://www.newyorker.com/reporting/2010/10/04/101004fa_fact_gladwell?currentPage=all.

Goffman, Erving. *Frame Analysis*. Harper and Row, 1974.

Gómez Peña, Guillermo and Roberto Sifuentes. *The Ethno-Cyberpunk Trading Post & Curio Shop on the Electronic Frontier*. Performance, 1994.

Graham, Beryl and Sarah Cook. *Rethinking Curating: Art After New Media*. Cambridge, MA: MIT Press, 2010.

Graham, Scott and Steven Hoggett. *The Frantic Assembly Book of Devising Theatre*. Hoboken: Taylor and Francis, 2012.

Haagensen, Cecilie. "Lived Experience and Devised Theatre Practice: A Study of Australian and Norwegian Theatre Students' Devised Theatrical Practice." PhD diss., Norwegian University of Science and Technology, 2014.

Hammer, Anita. "Weaving Plots: Frames of Theatre and Ritual in Simultaneous Interactive Digital Communication." PhD diss., Norwegian University of Science and Technology, 2001.

Hesmondhalgh, David. *The Cultural Industries*. 3rd ed. Los Angeles, CA: Sage, 2007.

Hilton, Julian, ed. *New Directions in Theatre*. Basingstoke: The Macmillan Press, 1993.

Hovik, Lise. "De Røde Skoene: Et Kunstnerisk Og Teoretisk Forskningsprosjekt Om Teater for de Aller Minste." PhD diss., Norwegian University of Science and Technology, 2014.

Innes, Christopher. *Avant Garde Theatre*. London: Routledge, 1993.

Jackson, Shannon. *Social Works: Performing Art, Supporting Publics*. New York: Routledge, 2011.

Jamieson, Helen Varley and Paula Crutchlow. *make-shift*. Performance, 2010. Accessed August 17, 2014. http://make-shift.net/.

Janko, Richard, trans. *Aristotle Poetics*. Indiana: Hackett Publishing Company, 1987.

Jenkins, H. *Convergence Culture*. New York: New York University Press, 2006.

Johnstone, Keith. *Impro: Improvisation and the Theatre*. London: Faber and Faber, 1979.

Jones, Caitlin. "Surveying the State of the Art (of Documentation)." Daniel Langlois Foundation, 2008. Accessed October 11, 2012. http://www.fondation-langlois.org/html/e/page.php?NumPage=2125.

Jones, Caitlin and Lizzie Muller. "Between Real and Ideal: Documenting Media Art." *Leonardo. Project Muse* 41 (2008): 418–9.

Jun, Liu. "Mobilized by Mobile Media: How Chinese People Use Mobile Phones to Change Politics and Democracy." PhD diss., University of Copenhagen, 2013.

Kahn, Catherine, Friedrich Kirschner, Trond Morten Venaasen, and Gaute Gjøl Dahle. *Verion: We Need More Data*. Theatre, 2009.

Kaprow, Allan. "The Legacy of Jackson Pollock." In *Essays on the Blurring of Art and Life*, edited by Jeff Kelley, 1–9. California: University of California Press, 1958.

Kaye, Nick. *Site-Specific Art: Performance, Place and Documentation*. London: Routledge, 2000.

Kelley, Jeff, ed. *Essays on the Blurring of Art and Life*. Berkeley, CA: University of California Press, 2003.

Kester, Grant H. *Conversation Pieces: Community and Communication in Modern Art*. Berkeley, CA: University of California Press, 2004.

Kirby, Michael. *Happenings: An Illustrated Anthology*. New York: Dutton, 1965.

Klich, Rosemary and Edward Scheer. *Multimedia Performance*. Basingstoke: Palgrave Macmillan, 2012.

Kohn, Alfie. *Punished by Rewards: The Trouble with Gold Stars, Incentive Plans, A's, Praise, and Other Bribes*. Boston: Houghton Mifflin, 1993.

Kotz, Liz. "Post-Cagean Aesthetics and the 'Event Score'." *October Magazine* 56 (2001): 55–89.

Kozel, Susan. *Closer: Performance, Technologies, Phenomenology*. Michigan: MIT Press, 2007.

Kurillo, Gregory, R. Vasudevan, E. Lobaton, and Ruzena Bajcsy. "A Framework for Collaborative Real-Time 3D Teleimmersion in a Geographically Distributed Environment." In *Proceedings of IEEE International Symposium on Multimedia* (2008). http://tele-immersion.citris-uc.org/publications.

Langsted, Jørn, Karen Hannah, and Charlotte R. Larsen. *Ønskekvist-Modellen: Kunstnerisk Kvalitet I Performativ Kunst*. Århus: Klim, 2003.

Laurel, Brenda. *Computers as Theater*. Reading, MA: Addison-Wesley, 1991.

Lehmann, Hans-Thies. *Postdramatic Theatre*. London: Routledge, 2006.

Lepage, Robert. *The Far Side of the Moon*. Theatre, 2000. Accessed November 7,
2012. http://lacaserne.net/index2.php/theatre/the_far_side_of_the_moon/.

———. *The Andersen Project*. Theatre, 2006. Accessed November 7, 2012.
http://lacaserne.net/index2.php/theatre/the_andersen_project/.

Lessig, Lawrence. *Remix: Making Art and Commerce Thrive in the Hybrid Economy*.
New York: Penguin Press, 2008.

Liptsin, Oleg. *The Nose*. Performance, 2010a.
———. "The Nose – Talk Post Performance." Berkeley City Club, California,
January 14, 2010b.

Løvlie, Anders Sundnes. "Textopia: Experiments with Locative Literature." PhD
diss., University of Oslo, 2010.

Maciunas, George. *Fluxus Manifesto*. Offset. The Museum of Modern Art, 1963.

Manovich, Lev. *The Language of New Media*. Cambridge, MA: MIT Press, 2001.

Manson, Candem. "How Do You Define Contemporary Performance?"
Contemporary Performance Network. February 24, 2011. Accessed December
15, 2012. http://contemporaryperformance.org/forum/topics/how-do-you-
define-contemporary.

Martin, Carol. "Bodies of Evidence." *TDR: The Drama Review* 50 (2006): 8–15.
———. *Theatre of the Real*. Studies in International Performance. Basingstoke:
Palgrave Macmillan, 2012.

Martin, Jacqueline and Wilmar Sauter. *Understanding Theatre: Performance Analysis
in Theory and Practice*. Stockholm: Stockholm University, 1995.

McGonigal, Jane E. 2006. "This Might be a Game: Ubiquitous Play and Performance
at the Turn of the Twenty-First Century." PhD diss., University of California
at Berkeley, 2006.

———. *Reality is Broken: Why Games Make Us Better and How They Can Change
the World*. London: Jonathan Cape, 2011.

Merlin, Bella. *Acting: The Basics*. New York: Routledge, 2010.

Montola, Markus, Jaakko Stenros, and Annika Waern. *Pervasive Games: Theory and
Design*. Burlington, MA: Morgan Kaufmann Publishers, 2009.

Moore, Wilbert E. *Social Change*. New Delhi: Prentice Hall India, 1965.

Morrison, Andrew, Henry Mainsah, Idunn Sem, and Martin Havnør. "Designing Location-Based Mobile Fiction: The Case of NarraHand." In *Discourse and Creativity*, edited by Andrew Morrison and R. Jones. New York: Longman, 2011.

Moulthrop, Stuart. "After the Last Generation: Rethinking Scholarship in the Days of Serious Play." In *Sixth Digital Arts & Culture Conference Information Technology*. University of Copenhagen, 2005. https://pantherfile.uwm.edu/moulthro/essays/.

Muller, Lizzie. "Towards an Oral History of New Media Art." *Daniel Langlois Foundation* (2008). Accessed March 7, 2012. http://www.fondation-langlois.org/pdf/e/towards-an-oral-history.pdf.

Murgia, Fabrice and Dominique Pauwels. *Ghost Road*. Musical theatre, 2012. Accessed November 22, 2013. http://www.lod.be/.

Nahrstedt, Klara, Ruzena Bajcsy, Lisa Wymore, Gregory Kurillo, Katherine Mezur, Renata M. Sheppard, Z Yang, and Wanmin Wu. "Symbiosis of Tele-Immersive Environments with Creative Coreography." In *ACM Workshop on Supporting Creative Acts Beyond Dissemination*. Washington, DC, 2007. http://tele-immersion.citris-uc.org/publications.

Nahrstedt, Klara, Ruzena Bajcsy, Lisa Wymore, Renata M. Sheppard, and Katherine Mezur. "Computation Model of Human Creativity in Dance Choreography." *Association for the Advancement of Artificial Intelligence* (*AAAI*) (2008).

Nelson, Robin. *Practice as Research in the Arts: Principles, Protocols, Pedagogies, Resistances*. Basingstoke: Palgrave Macmillan, 2013.

New York Times. "Atomic Power for Europe," February 4, 1957. Accessed November 7, 2014. http://www.nytimes.com/.

Nicholson, Helen. *Applied Drama: The Gift of Theatre*. Basingstoke: Palgrave Macmillan, 2005.

NYU graduate student and Franz Lantz. *PacManhattan*. Game, 2004. Accessed September 9, 2012. http://pacmanhattan.com.

Oberzan, Zachary. *Your Brother, Remember?*. Theatre, 2010. Accessed November 11, 2012.

Ono, Yoko. *Grapefruit: A Book of Instructions + Drawings*. New York: Simon & Schuster, 1971.

Oxford English Dictionaries. "High Technology." Oxford University Press. November 28, 2014a. http://www.oxforddictionaries.com/definition/english/high-technology.

———. "Low Technology." Oxford University Press. November 28, 2014b. http://www.oxforddictionaries.com/definition/english/low-technology.

———. "Serendipity." Oxford University Press. November 28, 2014c. http://www.oxforddictionaries.com/definition/english/serendipity.

Pérez, Elena. *Chain Reaction*. Performance. Berkeley, 2009. Accessed January 15, 2015. http://chainreactionstreetgame.wordpress.com/.

———. *Chain Reaction*. Performance. Trondheim, 2011. Accessed January 15, 2015. www.elenaperezrodriguez.com.

Pérez, Elena and Bogdan Španjević. *Random Friends*. Performance, 2011. Accessed January 15, 2013. https://www.facebook.com/randomfriends.trondheim.

Phelan, Peggy. *Unmarked: The Politics of Performance*. New York: Routledge, 1996.

Pinchbeck, Daniel. "Doing Development-Led Research in Games." Presented at the University of Copenhagen, Denmark, May 19, 2010. Accessed January 15, 2015. http://vimeo.com/12578274.

Playtime. *SFZero*. 2006. http://sf0.org/.

Prentky, Tim and Sheila Preston. *Applied Theatre Reader*. London: Routledge, 2009.

Puig, Toni. "Las Industrias Audiovisuales Y Los Nuevos Medios." In *Industrias de La Comunicación Audiovisual*, edited by J. Durán and Lydia Sánchez, 43–79. Barcelona: UB, 2008.

Rancière, Jacques. *The Politics of Aesthetics: The Distribution of the Sensible*. London: Contiuum, 2004.

Rancière, Jacques. *The Emancipated Spectator*. London: Verso, 2009.

Rasmussen, Bjørn. "The Art of Researching with Art: Towards an Ecological Epistemology." *Applied Theatre Research* 2 (2014): 22–32.

Ricoeur, Paul. "The Model of the Text: Meaningful Action Considered as Text." *New Literary History* 5 (1973): 91–117.

Riley, Shannon Rose and Lynette Hunter, eds. *Mapping Landscapes for Performance as Research: Scholarly Acts and Creative Cartographies*. Basingstoke: Palgrave Macmillan, 2009.

Rimini Protokoll. *The 100% City*. Theatre, 2008. Accessed January 10, 2015.http://www.rimini-protokoll.de/.

Risum, Jaane. "What is a Theatre Laboratory?" *Peripeti* 2 (2004): 15–21.

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Rønning, Barbro. "Folketeater: Et Begrep of En Analysemodell. Et Teatersyn Og En Visjon." MA diss., University of Oslo, 1990.

Rokeby, David. The Giver of Names. Installation, 1991

Roose-Evans, James. *Experimental Theatre: From Stanislavsky to Peter Brook*. 4th ed. London: Routledge, 1989.

Sánchez Coterón, Lara. "Arte Y Videojuegos: Mecánicas, Estéticas Y Diseño de Juegos En Prácticas de Creación Contemporánea." PhD diss., Complutense University, 2012.

Sandvik, Kjetil. "Devising Multimedia: Uses of Theatre in Analysis and Design of Interactive Multimedia Narratives." PhD diss., Aarhus University, 2003.

Schell, Jesse. *The Art of Game Design*. Amsterdam: Elsevier, 2008.

Sellars, Peter and Bill Viola. *Tristan and Isolda*. Opera, 2004.

Sermon, Paul. *Telematic Dreaming*. Performance, 1994. Accessed January 8, 2015. http://www.medienkunstnetz.de/works/telematic-dreaming/.

Shepard, Mark. *Serendipitor*. Locative media art, 2010. Accessed January 5, 2015. http://serendipitor.net/site/.

Sheppard, Renata M., Wanmin Wu, Z. Yang, Klara Nahrstedt, Lisa Wymore, Gregory Kurillo, Ruzena Bajcsy, and Katherine Mezur. "TEEVE: New Digital Options for Collaborative Dance in Geographically Distributed Tele-Immersive Spaces." In *ACM Multimedia (MM'07)*. Augsburg, Germany, 2007. http://tele-immersion.citris-uc.org/publications.

Smith/Wymore Dissapearing Acts. *Panorama: A Multimedia Happening*. Telematic dance, 2009. Accessed October 15, 2013. http://www.smithwymore.org/page13/page13.html.

Spolin, Viola. *Improvisation for the Theater: A Handbook of Teaching and Directing Techniques*. Evanston: Northwestern University Press, 1999.

Stage, Carsten. "Screens of Intensification: On DIY Concert Videos of Lady Gaga and the Use of Media Interfaces as Tools of Experience Intensification." *Journal of Aesthetics and Culture* 4 (2012).

Stevens, Tasso and Peter Law. *Sangre Y Patatas*. Game, 2010. Accessed February 15, 2012. http://www.papasangre.com/tag/sangre-y-patatas/.

Stiegler, Bernard. *Technics and Time*. Stanford, CA: Stanford University Press, 1998.

Stinehelfer, Brina. *Skype Duet*. Telematic theatre, 2011. Accessed January 15, 2014. http://per-aspera.net/en/skype-duet/.

Sullivan, Graeme. "Making Space: The Purpose and Place of Practice-Led Research." In *Practice-Led Research, Research-Led Practice in the Creative Arts*, edited by Hazel Smith and Roger T. Dean, 40–65. Edinburgh: Edinburgh University Press, 2009.

Taylor and Francis. "Aims and Scope." *Contemporay Theatre Review* 1 (2011). Accessed January 15, 2014. http://www.tandfonline.com/toc/gctr20/21/2#.Uxma5l4_Ok0.

The Builders Association. *Continous City*. Performance, 2007. Accessed January 9, 2015. http://www.thebuildersassociation.org/prod_continuous.html.

Tribe, Mark, Reena Jana, and Uta Grosenick, eds. *New Media Art*. Köln: Tashen, 2007.

Tronstad, Ragnhild. "Interpretation, Performance, Play & Seduction: Textual Adventures in Tubmud." PhD diss., University of Oslo, 2003.

———. "For En Mediespesifikk Spillestetikk." *Norsk Medietidsskift*, Universitetsforlaget, 19 (2012): 216–32.

———. "Performance." In *The Johns Hopkins Guide to Digital Media*, edited by Marie-Laure Ryan, Lori Emerson, and Benjamin J Robertson. Baltimore, MD: Johns Hopkins University Press, 2014a.

———. "Presence and Mediation: On the Participatory SMS Performance Surrender Control (2001, Tim Etchells)." *International Journal of Performance Arts and Digital Media* (2014b), 1–11.

Turkle, Sherry. *Life of the Screen: Identity in the Age of the Internet*. Simon & Schuster, 1995.

———. *Alone Together*. New York: Basic Books, 2011.

Turner, Victor. *From Ritual to Theatre: The Human Seriousness of Play*. New York: PAJ Publications, 1982.

Ullman, Harlan K and James Jr Wade. "Shock and Awe: Achieving Rapid Dominance." *National Defense University* (1996). Accessed January 15, 2013. http://www.dodccrp.org/files/Ullman_Shock.pdf.

Van Erven, Eugène. *Community Theatre: Global Perspectives*. London: Routledge, 2001.

Waern, Annika. "Information Technology in Pervasive Games." In *Pervasive Games: Theory and Design*, edited by Markus Montola, Jaakko Stenros, and Annika Waern, 163–74. Burlington, MA: Morgan Kaufmann Publishers, 2009.

Walker, Brendan. *Fairground: Thrill Laboratory*. 2006. Accessed March 2, 2013. http://www.aerial.fm/.

Willett, John, ed. *Brecht on Theatre: The Development of an Aesthetic*. Translated by John Willett. New York: Hill and Wang, 1964.

Wilson, Douglas. "Designing for the Pleasures of Disputation – or – How to Make Friends by Trying to Kick Them!" PhD diss., IT University of Copenhagen, 2012.

Yang, Z., Wu Yu Diankov R., and Ruzena Bajcsy. "Collaborative Dancing in Tele-Immersive Environments." *Proceedings of ACM Multimedia* (*MM'06*) (2006).

Yoctobit. *Homeward Journeys*. Game, 2010. Accessed January 15, 2014.www.yoctobit.com.

Yoctobit. *Mata La Reina*. Game, 2012. Accessed January 15, 2014. www.yoctobit.com.

PART II: Publications

Article 1:

'Academic Research and Artistic Practice in *Chain Reaction*: Methodology on Two Levels'

Academic Research and Artistic Practice in *Chain Reaction*: Methodology on Two Levels

Abstract: This article describes the ways in which an academic method of research was combined with an artistic method in the production of *Chain Reaction*, a creative project developed by the author as part of her PhD program, using the methodology of *practice-based research*. The article describes the research design and it presents the negotiation between two different questions throughout the project—artistic and academic—by analysing two significant moments: devising artistic work with collaborators and working with theory. It is then argued that the cooperation between artistic practice and academic research enriches each field while simultaneously creating a strong form of cultural practice with both aesthetic and epistemological elements.

Keywords: academic research, artistic practice, collaboration, performance, play-test, practice-based research, theory

1 Introduction

This article begins with the question: Is it possible to combine academic research and artistic practice in practice-based research? If so, how can these two different methodologies and their corresponding methods be blended successfully in practice-based investigation? In this article, I discuss the complexity of artistic and academic research methods in collaboration using the case study of *Chain Reaction* (Pérez, 2009; 2011), a performance piece I created as part of a PhD project, using the methodology of *practice-based research*.

In the humanities and the arts, terms such as *practice-as-research* (Allegue, 2009)*, practice-led research* (Dean & Smith, 2009*), and *performance as research* (Riley & Hunter, 2009) are used to describe a growing diversity of approaches. Practice-based research consists of developing practical or artistic work combined with a phenomenological interpretation of certain elements of the process through documented experience and generated material. With this method, research 'is done through practice, using methods intrinsic to the practice (such as investigations by form and conventions), as well as through a detached and reflexive approach, utilizing

methods more extrinsic to practice (such as digital documentation, interviews and notes)' (Rasmussen, 2014, p. 22).

British drama scholar John Freeman (2010) has argued for the method of *research through practice in performance*, a sub-variant of practice-based research. He has argued for the plausibility of the approach within the institutional confines of the university by proposing the generation of two different products: the artistic work in the form of performance and academic research in the form of a written dissertation. He has acknowledged how both processes are intrinsically different, since they are evaluated according to different parameters and they need to fulfil different criteria for quality. In his view of research through practice in performance, academic research and artistic practice in collaboration push each other into creating better artistic practice and better academic research. The resulting products are then evaluated according to a different set of criteria that are used for obtaining a doctoral degree.

Freeman's research through practice in performance model is the one that is closest to the methodology I used when creating *Chain Reaction*. I am a researcher— a (practising) academic —at the Norwegian University of Science and Technology, where I am writing a dissertation on the impact of digital media in performance. I am a trained academic doing art inside the institution of the university; I am not a trained artist doing research within the institutional confines of an art school.

Initially, this research focused on an experimental approach to consider the different possibilities of using ubiquitous media in contemporary performance and to address the ways in which those uses encourage creative expression. The following research questions were being tested through performance: *How can the use of media serve artistic practice and/or benefit aesthetic expression?* And conversely, *are there instances where the use of media restricts artistic practice, and/or disrupts aesthetic expression?*

In this article, I use the performance experiment of *Chain Reaction* to investigate the intersection between theoretical analysis and artistic practice. *Chain Reaction* is part of a theoretical project that tests its research questions through artistic practice, and then reaches conclusions through theoretical reflection. In this context, artistic 'practice' is understood as the creative process by which a work of art comes into existence, from the brainstorming phase to the materialized idea; thus, it does not only refer to practice as 'rehearsal'. In this article, I document the intricacies of

academic and artistic research methods in collaboration, and I argue that this collaboration enriches each field while simultaneously creating a strong form of cultural practice with both aesthetic and epistemological elements.

I shall first describe the research design from which the performance experiment departs. I will then present the two questions that have driven the *Chain Reaction* project—the artistic question and the academic question—and I will discuss how I have negotiated between these two separate questions throughout the project. To do this, I will analyse two significant moments that illustrate this interplay: devising artistic work with collaborators and working with theory.

2 Research Design: Two Sets of Questions and Two Methodologies

Conducting research through practice is a rewarding but challenging task. Even though I tried to plan the performance experiment in the most organized way, once the studio work started, the research plan became blurred.

Those who are used to working in the studio know that in order for experimentation to take place one needs to be able to tolerate a certain level of chaos, since it is part of the creative process. This characteristic of studio work seems to be at odds with academic research, which is based more on deliberate investigation of questions.

As I faced the tension between these two very different working modes, the artistic and the academic, I found it productive to adopt a reflective position and to force myself to identify and classify our practice under the label of 'artistic work' or 'academic work'. To be able to do this in the most open and least limiting way, I adopted a method by which I posed open questions to myself and to my collaborators, and I tried to identify those questions as belonging to either the artistic mode or the academic mode. In order to differentiate the two sets of questions and show how they respond to different aims and intentions, I have called them 'academic' and 'artistic' questions. When I use the phrase 'academic' questions, I mean the questions that follow academic criteria and standards of quality that are commonly used within the university, which have to do with research being systematic, informed and verifiable. When I say 'artistic' questions, I mean the questions that follow another set of criteria and other standards of quality that are commonly used within art schools, which have to do with how the practice conforms and/or subverts artistic conventions of form

(aesthetic, social and political). This does not mean that the artistic questions are not reflexive or analytical; they are, but they are based on different standards and criteria (Freeman, 2010, 77-82).

The first questions were the academic questions that initiated the experiment and they coincided with (some of) the research questions of my PhD project: *How can the use of media serve artistic practice and/or benefit aesthetic expression?* And conversely, *are there instances where the use of media restricts artistic practice, and/or disrupts aesthetic expression?*

Initiating an artistic project with an analytical question might seem unusual, but it is fundamental in practice-based investigation. According to Freeman, 'research questions as a starting point for formal inquiry are deemed necessary if the findings are to have any widely acceptable worth' (2010, p. 66). Furthermore, he argued that 'locating and addressing a question or questions is fundamental before identifying appropriate practice-based means of addressing them' (p. 66).

The initial artistic question was: *How do I structure the form of the event?* Other sub-questions were: *What procedures will be used? How will selections be made? To what cultural form am I subscribing? What is the artistic intention of the piece?*

To answer the academic question: *How can the use of media serve artistic practice and/or benefit aesthetic expression?* I have used standard procedures of humanistic reflection, such as hermeneutic and phenomenological interpretive analysis, to support my reflection process (Gadamer, 1988; Ricoeur, 1973; Fischer-Lichte, 1992; Martin & Sauter, 1995). The methods that I used can be recognized throughout the project in the moments when I have asked others to explicitly reflect on the project, when I have reflected on this question during the creation process of *Chain Reaction*, or when I have engaged with related theory in articles or conference papers.

Thus, I have used three methods: First, conducting informal interviews with collaborators (Kvale & Brinkmann, 2009). This has been done *in plenum*, in meetings where we were simultaneously planning the practice and also reflecting on it. It has also been done individually, when I met the collaborators for coffee and conducted informal interviews with them. Second, I have made changes to the practical project as a result of reflection in action as in 'action research' (Schön, 1984). This method advocates reflection in the action-present (a conscious activity) rather than using a

trial-and-error method, so that the researcher is able to find viable solutions when a surprise appears in the process of accomplishing a task. In other words, the 'reflective practitioner' is able to solve to problems that appear during practice through a reflection of the whole rather than through solving a specific problem (Schön, 1984). Third, my own analysis of the related literature was conducted partly between the orchestrations in Berkeley and Trondheim, but it was more rigorously done once the artistic practice was completed after Trondheim. Thus, this combination of methods was used to support the hermeneutic process (Gadamer, 1988) in which I reflected upon the research question.

In answering the artistic question: *How do I structure the form of the event?* I have used the artistic methodology of devising a performance that makes use of many methods, some of which I attempt to identify below. Inspired by the emergent form of pervasive games and the work of experimental theatre groups, such as the German Rimini Protokoll and the British Blast Theory*,* I developed my very own performance system, combining game design with theatre dramaturgy and ubiquitous media, and I used this system as the core structure of the performance. To balance the combination of these three elements, I organized 'play-test' sessions in which we selected or rejected elements according to feedback from the participants and the collaborators. The overall process was a collaborative effort in which experts from all disciplines contributed their own methods and procedures to create specific stages of the event. The artistic collaborators, for instance, were asked to create the tasks to be performed at the checkpoints. The game designer's task was to ensure gameplay quality and, in cooperation with the author, to adjust it to the dramaturgy of the piece. Even though we divided the work according to roles, the collaborators stepped out of their roles at times and contributed to the overall event.

3 Performance system

Chain Reaction is a hybrid form of pervasive game and interactive theatre, the goal of which is to encourage participants to engage artistically with public spaces and, ultimately, create and perform a short performance piece as a result of their interactions within the urban environment. It seeks to engage participants in collaborative events through a combination of gameplay, media and performance in public space.

The piece has a set performance system—or a game model—that structures the performance, as shown in the diagram below. While this core structure remains the same in each of the iterations, other elements must be adapted to each new cultural context, such as the fictional story, the tasks to be performed and the locations.
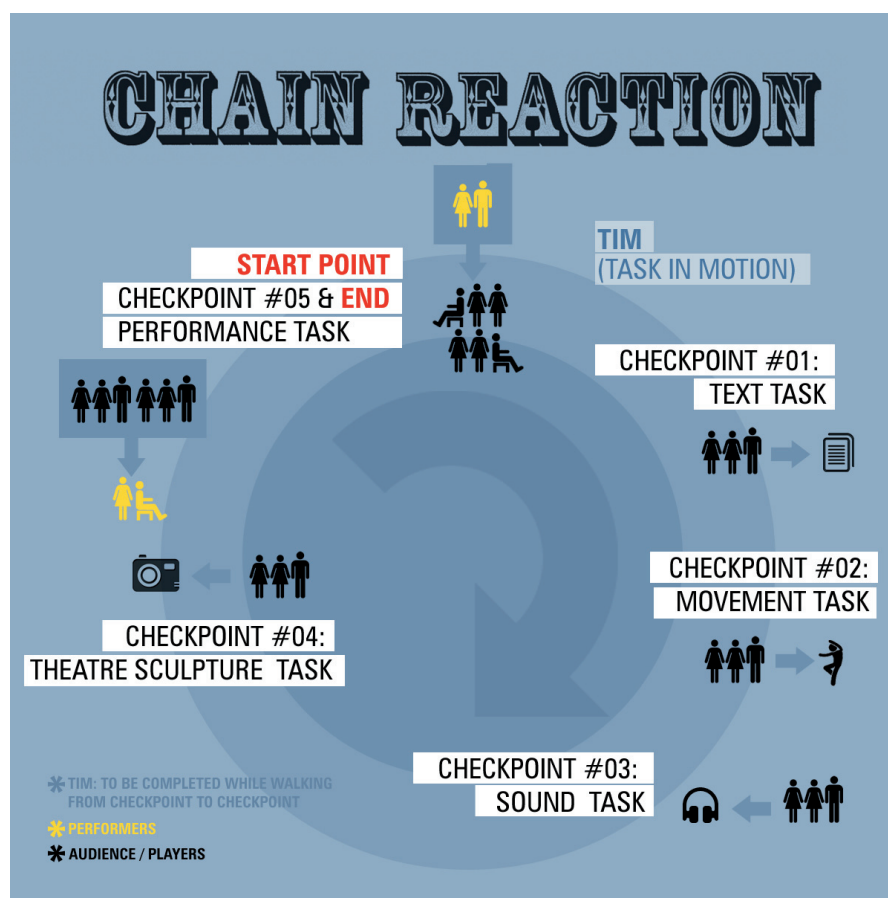
Figure 13. Structural model of *Chain Reaction.*

The performance goes as follows: Players meet in a specific place in the open, a park or a plaza, or inside a venue like a theatre, where a narrative is delivered by actors who then explain the game rules and hand out maps and mobile phones to the players, as shown in Figure 14. The story settings are important in that they motivate the players while simultaneously helping them understand their roles in the event. For example, the story setting of the Berkeley orchestration on 17 October 2009 had a satirical, futuristic narrative that connected with actual, serious political and social

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struggles related to the recent budget cuts and tuition fee increases at the University of California. This turmoil had caused demonstrations and protests among students and faculty members. According to the game's story, by 2020 Berkeley had been successfully privatized down to the very last brick. The University only accepted students that were guaranteed to contribute directly to the global economy—that is, students in the fields of business, economics, engineering and law. Degrees, such as History, Literature and Journalism, had disappeared. The University had become a corporation. The players' role was to help the corporation reach its goal of total privatization by going around the city and conducting research on the things, peoples or activities that could still be co-opted. The players were hired by UCB—*University Corporation Berkeley*—to present a report in the form of a performance, with the findings of their research and a recommendation to the corporation on how to proceed.

Figure 14. Theatrical introductions to *Chain Reaction* in Berkeley (2009) and inTrondheim (2011). Photography: A player named 'Spidere' and Lara Sánchez Coterón, respectively.

In the Trondheim orchestrations (twice on 27-28 May 2011), the story setting had a humorous, science-fiction narrative set in present time, where the players—characterized as aliens disguised as humans—were preparing for an invasion. In this expedition, the players were sent out into the city to gather data that would help aliens successfully invade Earth, finding out what was essentially human so that it could be co-opted for alien purposes. Their findings would also be presented to the other participants in the form of a performance, where they would have to use the materials they had collected through the city.

Once the narrative was delivered, the players had to go in groups (two to four) and visit all the checkpoints marked on the map they had been given. At each

checkpoint, an actor delivered a task that the players had to complete. The tasks were completed by the players, thereby generating and accumulating a different piece of artistic material at each checkpoint—a piece of text, a pattern of sound, a theatre sculpture and a sequence of movement, as shown in Figure 15.

Figure 15. Two players perform a movement sequence inspired in the environment during a play-test in *Chain Reaction*, Berkeley. Photography: Anders S. Løvlie.

At the last checkpoint, the players had to create a short performance piece out of the materials they collected. Each group performed its piece for the rest of the participants—other players and the actors—and there a final and informal vote was taken to decide on the 'best' show, whereby the 'winners' earned a symbolic trophy and the others received a badge as a keepsake of the event. After the event was over, the players were encouraged to document their experiences through text, pictures and videos posted on social media sites such as Facebook and/or SFZero.[1]

Figure 16. The winners of *Chain Reaction* in Trondheim right after their performance. Photography: Elena Pérez.

4 Devising artistic work with collaborators

Chain Reaction is an experiment resting at the convergence of ubiquitous media, performance and experimental game design. Although I have some knowledge of each of these three disciplines, I felt I needed help from experts in all of these fields. Understanding the use of experts as a post-dramatic artistic device in which a multidisciplinary team collaborates in the making of an artistic work (Lehmann, 2006), I decided to make an open call for collaborators in the networks in which I was

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[1] SFZero is an online collaborative game platform based in the San Francisco Bay area. Members earn points by completing game missions in the real world, and then documenting their actions online. Documentation serves as proof of the players' activities in the real world and also has game value in itself: the better the documentation, the more points it scores in the SFZero game world. See www.sf0.org.

interested. This resulted in a group of colleagues that contributed to this research from game studies, theatre, dance, performance studies and music. The collaborators' biographies range from academics in the arts who are engaging in practical-artistic projects such as this one, theatre students and game scholars.[2]

This next section of this article will describe three specific stages in the development of *Chain Reaction* —initial brainstorming, posterior play-testing and the game being played— to show how I, together with my collaborators, reflected on two different sets of questions and addressed two different purposes when creating *Chain Reaction.*

4.1 Brainstorming

During the first brainstorming session with the team of collaborators, I challenged them to answer different artistic questions that stemmed from the initial artistic questions, which included: *How do I structure the form of the event?*

As we decided we wanted to create a participatory event where participants would be facilitated into connecting to their creative sides, one of the questions I asked was: *How can we facilitate our audience engaging with artistic activities and exploring their creative sides through media?*

The team members were asked to devise artistic tasks to be performed at the checkpoints. To do this, I divided the team according to their knowledge and the four disciplines that I wanted to address—literature, dance, music and theatre—and I asked them to create tasks in which media were used in 'meaningful' ways. That is to say, the use of media in the exercise had to follow a specific need, and the exercise could not be completed without media.

To better explain what I meant by 'meaningful' use of media, I urged asked the collaborators to examine their proposals by asking them to consider the following analytical question: *What would this exercise lose if media were removed from it?* I framed this question as a sub-question to the initial academic question: *How can the use of media serve artistic practice and/or benefit aesthetic expression?*

After reflecting on this question, the collaborators devised several artistic tasks and we discussed them *in plenum*, selecting one or two exercises for each

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[2] For the Berkeley performances, all the collaborators were graduate students in the Department of Theater, Dance and Performance Studies. At Trondheim, the collaborators were a mix of graduate students, post docs and Bachelor of Arts students in Drama at the University.

discipline. In this brainstorming stage, we oscillated between addressing the artistic and academic questions, in an attempt to address both. We agreed that in order for a task to pass on to the next stage, that of play-testing, it would have to meet the selection criteria and address both the academic and artistic questions, and not just the artistic ones. The academic and artistic methods were linked at this stage, or perhaps embedded in each other, awaiting validation or rejection from the fieldwork in the next play-testing stage.

4.2 Play-testing stage

After the meetings in which we reflected on our activities, two play-tests were organized to see how the tasks engaged the players. A play-test is a common design strategy within game design where a game (or a part of the game) is orchestrated to test the game mechanics, tasks, sites, etc. in order to make selections, changes and adjustments according to the participants' feedback and the creators' observations before the public performance (Fullerton, Swain, & Hoffman, 2004).

The selections made during the play-tests took the tasks away from the academic mode of thinking and put a more exclusive focus on the artistic mode. As we found ourselves on the actual playground working with real participants, a variety of issues arose that we needed to address, which were independent of the initial academic question. For example, we found we needed to engage players by making the tasks more 'fun' than we had initially designed. As a way to solve this, we added social improvisation tasks that invited the site's inhabitants into the game, after the play-testers suggested it. Choosing to modify the tasks after receiving feedback meant that the artistic methods were prioritized over the academic questions, as the play-testers were not reflecting on the academic questions and they provided feedback according to their own experience of the event.

Another example is that we realised that relying on smartphones as fundamental tools to complete all the tasks could be detrimental to the event because, first, technology failed for unexpected reasons in 30 per cent of the cases and, second, some of the players reported smartphone saturation and they argued that they spent too much time and energy looking and dealing with their smartphones rather than focusing on the exercise. As a result of this feedback, we decided to alternate tasks that used smartphones heavily with tasks that used media in a more loose way and

could be completed without smartphones. Consequently, we again prioritized the artistic mode over the research mode, reducing media implementation.

4.3 The performance event

If we look at the tasks that made it into the final performance, it is possible to illustrate the compromises that were required. For example, if we consider something we called the 'mirror task,' we see an example of a task that satisfactorily addressed both the artistic and the academic questions. In this task, we decided to have the players use smartphones and a headset, so that they would listen simultaneously to a music track and mirror each other's movements. Two players were situated on opposite sides of a public square, fifty meters from each other. They were asked to gradually move towards each other, mirroring each other in slow motion until they physically touched each other, as shown in Figure 17. During the play-tests and the public performances, we found that when listening to a common track, the participants were better able to connect with each other and block outside noise while simultaneously performing the movements in a public space.

Figure 17. Chain Reaction, 2011. A group of players complete the mirror task at Trondheim's main square during the play-test. Photography: Ingvild Aarseth.

The 'literature or sound tasks' were modified to the point of ignoring the initial academic question altogether. In those tasks, the players were asked to engage

in conversation with strangers on the street and to get them to say the word 'corporation' (Berkeley orchestration) or 'fantasy' (Norway orchestrations) in a sentence, or get them to sing their favourite song (in the Berkeley orchestration only). The players had to write down the sentence and the song in order to memorize it, or record it on their smartphones, since it would later be used as the main text and soundtrack for the final performance. This exercise evolved from the initial proposal of asking the players to individually make a composition inspired in the environment into asking them to interact with passers-by to get the compositions from them. The artistic method was the use of social improvisation to get random people on the street involved in the creative process. In this way, the piece of text and the sound would stem from the interactions between the participants and strangers on the street, connecting *Chain Reaction* with the emergent tradition of *social works* that emerge out of the interactions among participants by using people as relevant elements of the artwork (Jackson, 2011). Adjusting the task pushed players into social action rather than relying on a more introspective mode of observation, which facilitated them staying engaged in playing the game at the beginning when this task was first encountered. This is an example of how the artistic methods adjusted the task to the benefit of the overall event at the expense of the academic question that was initially posed.

Through these three moments, we see the interplay between the artistic methods and the academic methods. Even though both types of questions are linked throughout the process, they can be understood as two sides of the same project; the academic questions were in focus during the early planning stages and the artistic framework somehow pushed itself to the forefront during the task selection and public event stages.

5 Working with Theory

In this section, I will refer to the times when I have analysed the practice with related art, game and media theory.

As part of his practice-based investigations, game designer and scholar Douglas Wilson (2012) has proposed the methodology of *research* after *design* as a way to embrace a purposeful distance between academia and game design practice. In Wilson's view, these two practices operate in two different social and cultural worlds,

a distance that should be embraced, as it is fruitful for generating new ideas (2012, pp. 32-38). As he has argued, 'The lesson is that sometimes, it is more productive to *embrace* the tension between those two worlds, rather than struggling to reconcile them cleanly' (p. 38).

Wilson's remarks echo my experience of creating and reflecting on *Chain Reaction* in that 'most' of my research outcomes have also happened after practice; I also found the interplay between the two worlds beneficial to the way I was able to reflect on the project. However, my experiences with *Chain Reaction* can offer a better understanding of 'the tension between the two worlds' and the ways in which this tension can actually be fruitful.

I carried out written theoretical analyses 'after' each orchestration of *Chain Reaction.* As it was orchestrated three times, once in 2009 and twice in 2011, the theoretical reflection that happened in between orchestrations affected the subsequent practice.

After the first orchestration of *Chain Reaction* in Berkeley in 2009, I presented two conference papers: one at the *Games: Design and Research Conference* at Volda University College, Norway, 3-4 June 2010, and another at the *16th Performance Studies International Conference* (PSI) in Toronto, 9-13 June 2010.

The aspects I reflected upon in the papers I presented at these conferences were not the role that media play in creative expression in *Chain Reaction* —the question that initiated the practical project—but rather, I focused on the other research questions that arose from practice and execution.

In research through practice, this shifting of foci can be understood as being part of the process where new stimuli arise from practice and are incorporated into the reflexive documentation process. In the practice-based investigation '*Returning to Haifa*', a project that researches the use of dramatic texts in education, Owens and Al-Yamani (2010) argued positively that as practice progresses, new research questions are embedded in and arise from that practice. Furthermore, they argued that in order to accommodate these shifting imperatives and motivations, practice must be restructured.

Analysing *Chain Reaction* as a case study, we also find that new research questions arose from the issues that were revealed in practice, and a shift in the practice occurred to accommodate those new motivations. However, in response to the shift demanded by practical considerations, the second and third performances in

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Trondheim became an attempt to re-direct the focus towards one of the initial main research questions in my PhD project: *How can the use of media serve artistic practice and/or benefit aesthetic expression?* Engaging with related theory upon detached reflection after the Trondheim performances resulted in the writing of an article, entitled 'Fostering Participation through Ubiquitous Media in Pervasive Performance', which addresses this question and which is included in my thesis (Pérez, 2014b, 115-143). Out of that thinking process came the understanding that the most radical use of media in *Chain Reaction* was something that I, as the author, had disregarded as being too strenuous and uninteresting as a gameplay element, namely: the participants' documenting their own activities with their own mobile phones while playing *Chain Reaction.* During the Berkeley performance, the players took it upon themselves to document their experiences with a few pictures and videos taken with their personal mobile phones. They used this documentation to craft multimedia stories in a web interface where they explained their experiences. These accounts turned out to be well-composed and highly elaborated narratives that match the aesthetic standards of the large game collaborative platform, SFZero (Playtime, 2006).

The possibility of documenting *Chain Reaction* was provided to the players in the Berkeley event because such a platform (SFZero) existed and thrived in the San Francisco Bay Area, and the platform had agreed to accommodate the event as part of its large online community. The lack of such an online game community in Norway meant that this aspect of the work was missing in the performances in Trondheim. Even though SFZero is an online platform, and geography supposedly should not matter, the platform would have to be introduced to participants, which would mean extra work and effort for them, which made us decide against its use in Norway.

Through the reflective process of writing the above-mentioned article, I came to understand that the value of this documentation emerged from how it was executed entirely by the players. In this particular case, documentation was facilitated by the players' having been recruited from the SFZero community. Thus, they knew the platform beforehand and they were familiar with the documentation criteria that were used to score points in SFZero. In this sense, their documentation of *Chain Reaction* served two purposes: to fulfil the requirements to play *Chain Reaction* and to gain points in SFZero. In this case, the answer to the research question—*How can the use of media serve the artistic practice and/or benefit the aesthetic expression?*—was: the

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media functioned to foster the players' creative expression through documentation and to also facilitate the transformation of the players into creative documentalists.

Realising the relevance and importance of this issue to my research interests, I decided to keep exploring it through related theories on art and archives. I started writing another article, entitled 'Experiential Documentation in Pervasive Performance: The Democratization of the Archive' (Pérez, 2014a). In that article, using the case study of *Chain Reaction*, I discuss alternative possibilities for documenting participatory events where designers and participants collaborate not only on the making of events but also on the making of their archives.

In retrospect, I realise that I could have done things differently by addressing the initial research question—*How can the use of media serve the artistic practice and/or benefit the aesthetic expression?*—through theoretical analysis after the first performance of *Chain Reaction,* and not only after all the orchestrations had been completed. The practical consequence of doing this 'incorrectly' was that I was not able to implement the findings on the possibilities for the development of *player-led documentation* in the second orchestrations of *Chain Reaction*; thus, I missed the opportunity to take this part of the research further by making documentation the main object of study in the performance events in Trondheim. However, I also acknowledge the fact that if I had done things differently, I would perhaps still be unaware of one fundamental methodological insight that I obtained by doing things 'wrong', which is that the initial research questions need to be addressed *regularly* throughout the project in dialogue with theoretical analysis, and not only 'after' practice. Applied in this way, theory 'can be used to open the ground for new practice' (Freeman, 2010, p. 265).

6 Conclusion

In this article, I have attempted to shed light on the complexity of the collaboration between academic research and artistic practice, between theory and practice.

I argued that I found it productive to identify and verbalize two sets of questions that drove the project: the academic questions and the artistic questions. In this way, I was able to discern when we were working with either artistic issues or academic issues; thus, I achieved a reflective distance to make sense of the creative

process, which is often very difficult to articulate and make sense of, as it is chaotic and driven by so many divergent forces.

I have discussed two aspects of the project where the tension between theory and practice was brought forward. First, I discussed the working routines with the collaborators in which we constantly oscillated between the two different frameworks of the research questions—the academic and the artistic. The gameplay tasks that were created show how the artistic question was transformed through practice and how the academic question—as a point of departure from the artistic question—was (at times) purposely ignored. This dynamic illuminates the struggle of the shifting priorities that drive an investigation through practice. Second, I described how theoretical analysis after practice made explicit the aspects of the artistic work that would have otherwise remained hidden. In the same way that 'reflection in action' is fundamental in practice-based investigations, so too is theoretical analysis and interpretation.

My conclusion is that academic and artistic methods in collaboration can benefit both fields. On the one hand, the collaboration grounds research in current real world issues, shortening the gap between theory and practice. On the other hand, the collaboration may enhance artistic practice. This is because the individual and collective moments of reflection in action (during the creation and performance orchestration), together with interpretation through theory *a posteriori*, help the event become more robust and thought through and, in this way, it can blossom into a reflective cultural production. The academic and artistic research in collaboration creates a hybrid form that has value of its own while simultaneously reflecting back into both fields.

References

Allegue, L. (Ed.). (2009). *Practice-as-research: In performance and screen*. Basingstoke: Palgrave MacMillan.

Dean, R. T., & Smith, H. (Eds.). (2009). *Practice-led research, research-led practice in the creative arts*. Edinburgh: Edinburgh University Press.

Fischer-Lichte, E. (1992). *The semiotics of theatre*. Bloomington, IN: Indiana University Press.

Freeman, J. (2010). *Blood, sweat & theory*. Oxfordshire: Libri Publishing Ltd.

Fullerton, T., Swain, C., & Hoffman, S. (2004). *Game design workshop: Designing, prototyping and playtesting games*. San Francisco, USA: CMP Books.

Gadamer, H.-G. (1988). On the circle of understanding. In J. M. Connolly & T. Keutner (Eds.), *Hermeneutics versus science?* (pp. 68-78). Notre Dame, IN: University of Notre Dame Press.

Jackson, S. (2011). Social works: Performing art, supporting publics. New York: Routledge.

Kvale, S., & Brinkmann, S. (2009). *Interviews: Learning the craft of qualitative research interviewing* (2nd ed.). Los Angeles, CA: Sage.

Lehmann, H.-T. (2006). *Postdramatic theatre*. London: Routledge.

Martin, J., & Sauter, W. (1995). *Understanding theatre: Performance analysis in theory and practice*. Stockholm: Stockholm University.

Owens, A., & All-Yamani, H. (2010). Returning to Haifa: Using pre-text based drama to understand self and other. In J. Freeman, *Blood, Sweat & Theory* (pp. 9-22). London: Libri Publishing Ltd.

Pérez, E. 2009. *Chain Reaction*. Retrieved from http://www.elenaperezrodriguez.com/#!art-work/vstc3=cr-/-s-francisco%2709

Pérez, E. 2011. *Chain Reaction*. Retrieved from http://www.elenaperezrodriguez.com/#!art-work/vstc3=cr-/-trondheim%2711

Pérez, E. (2014a). Experiential documentation in pervasive performance: The democratization of the archive. *International Journal of Performance Arts and Digital Media*, *10*(1), 76-89.

Pérez, E. (2014b). The impact of digital media in contemporary performance: How digital media challenge theatrical conventions in multimedia theatre, telematic and pervasive performance. Thesis (PhD). Norwegian University of Science and Technology, Trondheim.

Playtime, 2006. *SFZero*. Retrieved from http://sf0.org/

Rasmussen, B. (2014). The art of researching with art: Towards an ecological epistemology. *Applied Theatre Research*, *2*(1), 22–32.

Ricoeur, P. (1973). The model of the text: Meaningful action considered as text. *New Literary History*, *5*(1), 91–117.

Riley, S. R., & Hunter, L. (Eds.). (2009). Mapping landscapes for performance as research: Scholarly acts and creative cartographies. Basingstoke: Palgrave MacMillan.

Schön, D. (1984). The reflective practitioner: How professionals think in action. New York, NY: Basic Books.

Wilson, D. (2012). Designing for the pleasures of disputation - or - how to make friends by trying to kick them! Thesis (PhD). IT University of Copenhagen,

Article 2:

'Fostering Participation through Ubiquitous Media in Pervasive Performance'

Fostering Participation through Ubiquitous Media in Pervasive Performance

Abstract: This article reflects on *Chain Reaction* (2009 and 2011), a mix-performance combining ubiquitous media with performance conventions and experimental game design. It explores the ways in which ubiquitous media were used to foster participants' creative expression, and how these strategies impact performance conventions of spectatorship and participation.

By combining performance, game and ubiquitous media in public space, it is claimed that *Chain Reaction* enables spectators to cross conventional thresholds and experience different participatory roles during one and the same event, -going from spectator, to (performative) player, to theatre actor and documentalist.

Keywords: actor, games, participation, performative play, pervasive performance, ubiquitous media

1 The Applications and Analysis of Ubiquitous Media

The term ubiquitous media refers to a variety of media embedded in everyday environments that have the potential of connecting with other media anywhere and anytime such as applications, GPS technology, navigation and the Web. A body of humanistic theoretical work addressing creative uses of ubiquitous media is proliferating in the recent years (McGonigal 2006; Montola et al. 2009; Løvlie 2010)

Within the field of theatre and performance, the challenges that digital media poses to the field are slowly being discussed (Lehmann 2006; Dixon 2007; Balme 2010). Gabriella Giannachi and her co-writer Steve Benford have published journal articles about the implications of ubiquitous media for theatre and performance in the works of the British group Blast Theory (2008; 2009; 2010), together with a recent publication *Performing Mixed Reality* (2011), where they attempt to understand this phenomenon (mainly Blast Theory's practice) from the joined perspective of performance studies and human-computer interaction (HCI). These works represent a small percentage compared to the extensive research on the topic conducted in the fields of computer science and ubiquitous computing, which mainly focus on the technological aspects and leave the aesthetic aspects aside (Benford et al. 2003; 2006;

Allen et al. 2008). In this sense, there is a disparity in the attention these events are receiving from academia—very much from the technologists and very little from the humanists.

Both perspectives tend to use apologetic language, and focus mainly on how ubiquitous media re-invigorate the artistic practice to which it is being applied. Espen Aarseth warns against this celebratory language when studying digital media in his article "We all want to change the world: the ideology of innovation in digital media" (2004) and calls for research that challenges the advocatory view on innovation automatically associated with media. Taking this concern a step further, Jane McGonigal warns against the enthusiastic "rush to colonize the world with technology" and challenges us to question why ubiquitous media should be used at all (2006, p.160). In her view, there is a need to examine the large social and aesthetic consequences of using ubiquitous media to understand how to use them well and meaningfully.

Here, we see there is a need to test the assumption that the application of ubiquitous media to the arts, may improve the art. We need to ask what is ubiquitous media adding to the art, how it is doing it and ultimately, we must question whether it is meaningful to do it at all. In this article, I shall use the case study of *Chain Reaction* (2009 and 2011) to address the following questions: How were ubiquitous media used to foster creative expression and participation? What were the strategies at use? What was achieved through the implementation of ubiquitous media? And finally, how does a mixed performance form challenge conventions of spectatorship and participation?

2 *Chain Reaction*: The Performance System

The performance project of *Chain Reaction* (2009 and 2011) was located at the convergence of ubiquitous media, contemporary theatre and performance and experimental game design. The specific and selected ubiquitous media in *Chain Reaction* were an open source application for smartphones *(Every Trail,* GlobalMotion Media 2010) and two social media Web platforms in connection to the events, Facebook and SFZero (Playtime 2006).[1] Each group of participants was given a smartphone to be used in different ways throughout the event. The GPS system and navigation connected participants with the theatre house where organizers monitored players and collected data to be used later in the final performances. The social media

platforms were used by participants to document the event through text, pictures and videos *a posteriori.*

Chain Reaction seek to engage participants in collaborative events through a combination of gameplay, media and performance in public spaces. In this article I will call this emergent hybrid phenomenon *pervasive performance*. It has a fix performance system —or a game model—that structures the performance. This core structure remains the same in every orchestration, and it is as follows: Players meet in a specific place in the open, a park or a plaza, or inside a venue like a theatre, where a narrative is delivered by actors as shown in Figure 7, who then explain the game rules and hand out maps and mobile phones. On the map, there are checkpoints marked. Players must go in groups (two to four) and visit all the checkpoints. At each checkpoint, there is an actor that delivers a task that players must complete. The tasks end by generating and accumulating a different piece of artistic material in each checkpoint—a piece of text, a pattern of sound, a sequence of movement and a theatre sculpture. In the last checkpoint, players must create a short performance piece out of the materials they have collected. Every group performs its piece for the rest of participants—other players and the actors—and there is a final and informal vote to decide on the "best" show, whereby the "winners" gains a symbolic trophy and the others get a badge to remind about the event. Once the event is over, players are encouraged to document their experiences through text, pictures and videos on social media such as Facebook and/or SFZero.

Figure 18: *Chain Reaction*, Trondheim, 2011. Actors explain in a theatricalised manner the game goals, rules, and the route to follow on the map projected in the background to the audience. Photography: Lara Sánchez Coterón.

While the performance system remains the same in every iteration of *Chain Reaction,* other elements must be adapted to each new cultural context such as the fictional story, the tasks to be performed and the locations. It has been publicly orchestrated three times, once on 17 October 2009 in Berkeley, USA, and twice on 27-28 May 2011 in Trondheim, Norway.

2.1 The Events

In Berkeley, the story setting had a satirical, futuristic narrative that connected with actual, serious political and social struggles related to the recent budget cuts and increases of tuition fees at the University of California. This turmoil had caused demonstrations and protests among student and faculty members. According to the game's story, by 2020 Berkeley had been successfully privatized down to the very last brick. The University only accepted students that were guaranteed to contribute directly to the global economy—that is, students of Business, Economics, Engineering and Law. Degrees such as History, Literature and Journalism had disappeared. The University had become a corporation. The players' role was to help the corporation reach its goal of total privatization by going around the city and conducting research on things, peoples or activities that could still be co-opted.

Players were hired by UCB—*University Corporation Berkeley*—to present a report in the form of a performance, with the findings of their research and a recommendation to the corporation on how to proceed.[2]

The intended participants were students living and studying in the Berkeley area and members of the online collaborative game community SFZero that framed the event. Besides SFZero, *Chain Reaction* had neither support from local theatre institutions nor from the University and it was therefore played entirely in public spaces. In the public performance there were fifteen participants.

Documentation was done partly by organizers and partly by players themselves. Two cameramen were hired by the author to record video and take pictures of the event, which were posted on the event's blog. In addition to this documentation, (some) players used their own mobile phones to document their own playing activities to later—from home—post them on SFZero's webpage, as shown in Figure 19. The player-driven documentation that appeared in SFZero is a result of players engaging with *Chain Reaction* as a sub-game of SFZero. In other words, by playing *Chain Reaction* players were participating in two games: they played *Chain Reaction* while simultaneously documented it to score points in SFZero. This explains why the player-driven documentation was done mainly in SFZero's website and not in the event's blog. It also explains the complexity and sophistication of the documentation—compositions of text, pictures and videos—designed to match the documentation standards of the SFZero game.

Checkpoint "SOUND"
at the corner of Bancroft and Shattuck.

Find a stranger over 40 years old to sing you his/her favorite song. Learn it AND note it down. The song must to be 15 seconds long.

- It MUST be someone who is not in the game
- You MAY NOT tell the person that you are playing a game.

This was our favorite task.

Beetle bomb and Firecracker: We didn't have to go far for this task. At first we asked a mailman walking into the post office, he said said he had had to get to work, but he left with a smile on his face, so that was a victory. Next we approached two women having a conversation on the street corner. Both very friendly, the first sang "Here comes the sun" but did not sing quite enough of it to count for the task. the second sang "summertime" by gershwin which we sang along with her to encourage her to sing enough of it. we thanked them and bid them farewell

Spidere: In a random shoe repair store in Berkeley, we asked a waiting gentleman if he would sing us his favorite song. He said yes, he would...it turns out he'd been a professional musician for twenty years, and sang us this beautiful soulful tune (sadly, the poor sound quality does not do it justice):

Figure 19: *Chain Reaction*, Berkeley, 2009. Documentation of "sound task" where three players, namely *Bettle Boom, Firecracker* and *Spidere*, jointly describe through text and a video how they solved the task. In the video, we get to see a man singing his favourite song to them. Screenshot of SFZero's webpage.

In Trondheim, the story setting had a humorous, science-fiction narrative set in present time, where players—characterized as aliens disguised as humans—were preparing for an invasion. In this expedition, players were sent out into the city to gather data that would help aliens invade Earth successfully, finding out what was essentially human so that it could be co-opted for alien purposes. Their findings would also be presented to the other participants in the form of a performance, where they would have to use the materials collected through the city.

This playful alien invading narrative differs vastly with the more socially engaged narrative in Berkeley. Though we were aware of this difference, the

seriousness/lightness of the theme did not have implications in the design of the last phase of the event—the final performances.

The intended participants were students and theatregoers. The local experimental theatre house in Trondheim—*Teaterhuset Avantgarden*—framed the event and made it part of their Spring 2011 program. The implementation of technology was made through funding from the author's department of affiliation at the Norwegian University of Science and Technology (NTNU). In the public performances there were forty-two participants on the first day and ten participants on the second day.

Documentation was again partly done by organizers and partly by players themselves. We had volunteers from the theatre house recording and taking pictures of the start and end of the event. This time, instead of having cameramen follow teams of players as they traversed the city, we encouraged players themselves to document their activities with the smartphone we provided them with at the start. To afford player-driven documentation, we also designed tasks so that players had to take pictures of their playing activities as part of the game mechanic (i.e. theatre task). This way, we ensured that each team would document their journey in the public space with their smartphone, and that we would get access to all that documentation once teams returned the smartphones at the end of the event. This way of getting documentation from players was more direct and secure—providing loads of pictures and videos—but resulted in raw and simple material that was not contextualized by players. The lack of a game community like SFZero in Trondheim made us look for other ways to have players document and contextualize their experiences in *Chain Reaction*. In collaboration with the theatre house, we attempted at creating an online space within Avantgarden's webpage, but this initiative did not succeed. In the end, we used Facebook and the author's personal webpage, but except for some occasional pictures posted on Facebook right after the event, no one contributed with a more elaborated story of their experiences.

3 The Research Methodology

This project applies *research through practice in performance*, a sub-variant of practice-based research (Freeman 2010). This means an investigation in practice, combined with phenomenological interpretation of elements of the process by ways of

documented experience and generated material. In the humanities and the arts, terms such as *practice-as-research* (Allegue 2009), *practice-led research* (Dean & Smith 2009) and *performance as research* (Riley & Hunter 2009) are used to describe a growing diversity of approaches when the art field meets research. *Research through practice in performance* as understood by Freeman consists of combining artistic practice with theory throughout the designed process. In this view, artistic practice and theoretical reflexion in collaboration enriches each other while simultaneously creates a strong form of cultural practice with both aesthetic and epistemological elements. Our practice design consisted on four main stages: a pre-production stage where the research question was identified and premises were set by the main author, the development of the games with collaborators, the performances themselves and the documentation of the performances. We wanted to experiment with the different possibilities of using our chosen ubiquitous media in contemporary theatre and performance, addressing the ways in which these uses encourage creative expression by the participant. Initiating an artistic project by an academic question might seem unusual, but fundamental in practice-based investigation. According to Freeman, "research questions as a starting point for formal inquiry are deemed necessary if the findings are to have any widely acceptable worth". Furthermore, he argues, "locating and addressing a question or questions is fundamental before identifying appropriate practice-based means of addressing them"(2010, p.66).

In addition to the research question, the practical project was designed under two premises: First, it would be a collaborative project in which a multidisciplinary team of experts create an artistic work, as it is common in post-dramatic theatre practices (Lehmann 2006). A call for collaborators was sent, which resulted in a group of practitioners and academics from the humanities and the arts, ranging from theatre, dance and performance studies, music, game design and new media, who not only developed the work but also orchestrated the performances themselves. Second, the project would take a low-tech approach and experiment with media that are familiar and available to the ordinary person / artist rather than using high-tech— more elitist technologies. This decision was inspired by Jane McGonigal's claim that the use of ubiquitous media has to be following a need and not a turn into a gimmick. In her doctoral thesis (2006), she argues that high-tech projects that seek to advance technologies further risk undermining the aesthetic for the sake of the technical, and create works that are technically advanced but offer little interest as cultural products

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(140).[3] Following this line of thought, this project's purpose was not to advance technology further but rather to apply familiar ubiquitous media in performance work. The second and third phases of the project—the development of the games with collaborators and the performances themselves—were created by combining artistic practice and analytic research. The main author chose and adapted an emergent cultural form that combines games, performance and ubiquitous media to create participatory events that take place in the city with the help of technology, and used it as the main frame. The specific artistic tasks were selected from several critical experiments and joint collaborations.

After various practical explorations and discussion meetings, two playtests were organized—to see how the tasks engaged players. A playtest is a common design strategy within game design were one orchestrates a game (or parts of it) to test out game mechanics, tasks, sites, etc before the public performance and make selections, changes and adjustments according to participants' feedback and creator's observations (Fullerton et al. 2004).

The last phase of documenting the performances was developed simultaneously with phases two and three. The applied tools here were a combination of standard documentation strategies for performance such as video recordings of the event (and playtests) carried out by cameramen hired by the author, and other alternative methods developed to document mobile players when distributed across city space. These methods consisted in encouraging players themselves document the event with the smartphones by making documentation part of the game.

4 Implementation of Ubiquitous Media

The core design of *Chain Reaction* consists of players traversing the city with the help of paper maps, actors giving instructions on location, players completing tasks and real world performances. We were using smartphones to traverse the city creatively and also to complete individual tasks. The data collected with the smartphones (maps, photos and videos) were used to construct the digital scenography at the theatre house, projecting selections of data as background to each groups' performance piece. What was achieved by the two events, and how essential were ubiquitous media in Trondheim and Berkeley, in order to foster creative expression and participation?

4.1 Traversing the City with Smartphones

In Berkeley we had a task called "task in motion" that asked players to "get hold of something for free" as they traversed across the city in the game. In Trondheim we designed an ubicomp version of this task: the "digital drawing". The "task in motion" in Berkeley added a level of playful interaction with the environment while walking. For example, groups got hold of free newspapers and asked for ice-cream samples— and these were later used as props in the final performances. The Trondheim version, the "digital drawing "asked players to draw a sign in space while walking from checkpoint to checkpoint. Using *Every Trail* (GlobalMotion Media 2010)*,* an open source application for smartphones that traces users' trails and uploads them onto a map real time, players were instructed to draw a sign in space that would be used by aliens to invade Earth (the sign should indicate where to land the spaceships).

According to Annika Waern (2009), using technology to "track players" is a common design strategy within pervasive games, but here we gave it a less utilitarian and more creative twist. We instructed players to start the application once they left the theatre and use the pause button to stop the tracing when they needed to. This way, they could be strategic about the form they wanted to create in relation to their movements across the city. In this sense, the digital drawing was designed to engage players with the city space creatively, by making them choose a form for their sign and draw it with their embodied movements through media as shown in Figures 20 and 21. While the "task in motion" afforded players carefully searching for the playful interactions of objects and people as they traversed the city, the "digital drawing" afforded players interacting with the city in both, symbolic and physical terms.

Figure 20: *Chain Reaction,* Trondheim, 2011. A group of players wearing fake moustaches—a prop designed to discern them from other bystanders while simultaneously add a playful dimension to their journey—walk from checkpoint to checkpoint while drawing a sing in space with their mobile phones. Photography: Lara Sánchez Coterón.
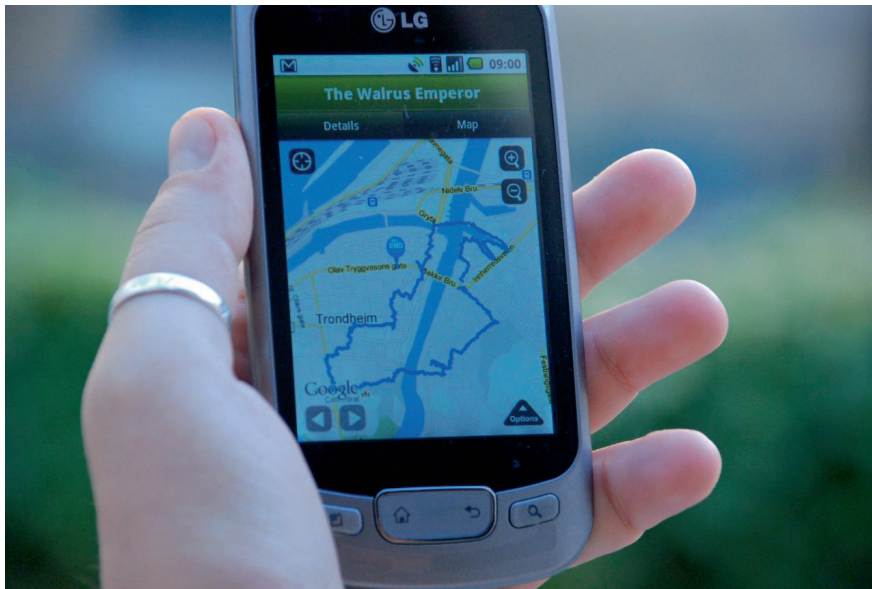
Figure 21: *Chain Reaction*, Trondheim, 2011. Close-up of the smartphone's interface of group named The Walrus Emperor, which drew the profile of a walrus, a marine mammal. Photography: Elena Pérez

Could players have drawn their routes on the already existing maps to form the shapes of their symbols? Of course they could have, but the difference is major: First, the GPS tracing system ensured the walk being done physically real time, and not mentally *a posteriori*. We found that the degree of engagement in the player rose when the device captured her movement *as she was moving*. Second, the trails were uploaded into a digital map that served as documented proof of task solving. With paper maps, players could have easily drawn the routes without actually walking them. Furthermore, the digital drawing was essential for the final performances, where it was used as part of the scenography as it was projected onto a big screen, as well as part of the story being narrated. In this way, the use of ubiquitous media (as further developed in Trondheim) enhanced the participative and joyful game dimension as well as contributed to the aesthetic of the performative event.

4.2 Completing Tasks with Smartphones

The individual tasks designed for the checkpoints in Trondheim were more or less reworks of the Berkeley event adapted to the new cultural context and now also implemented with smartphones. One such task, "the mirror task", was a theatre exercise that was experienced as awkward by some of the Berkeley participants. In the Trondheim version we used the smartphones and a headset to have players listen to music while they mirrored each other's movements. In this task, two players located themselves on an opposing side of a public square, fifty meters away from each other. They had to slowly move towards each other, mirroring each other in quite slow motion until they touched as shown in Figure 22. Once it was over, players picked a ten second sequence of movement they had made, rehearsed and memorized it to be used at the final performance.

Figure 22: *Chain Reaction*, Trondheim, 2011. Two players mirror each other movements in Trondheim's old bridge named "Gamble Bybro". Photography by players.

Listening to a common track, participants in Trondheim were better able to connect with each other and block outside noise while simultaneously performing the movements in a public space. The participants here felt safer "acting" in the streets by the support of the mobile phone, music and rhythm. It could be argued that it was the music, not the smartphone, what helped structuring the mirroring exercise and precise movement, also making the aesthetic exercise safe and joyful. We found that it was the smartphone, headset *and* the music together that lowered the threshold of participation and prompt players into action. In this sense, the smartphone is the medium and the music provides the impulses or instructions.

This way of structuring and making public participation safe by using ubiquitous media is supported by *The Mp3 Experiment* by urban pranksters Improv Everywhere (2004 and ongoing). In this massive public spectacle, players download a common track on the Internet onto their Mp3 players (approx. 45 min length), gather in a public space and start the track on command, which lead to a mix of massive dances and joint actions. Using headphones allow players to perform highly extroverted commands in public quite comfortably. Jane McGonigal criticizes this use of ubiquitous media when she argues that using headphones to promote participation among those *in the know* perversely prevents participation among *those not in the*

know (2006, p.215). In fact, claims McGonigal, it is the dark pleasure of shutting others out what makes players be more extrovert in their own performances. In *Chain Reaction*, the smartphone rather allowed inclusion and collaboration in the way the two players connected to each other through the music track and to tune out outside noise. That is, by tuning "city" noise out they were better able to perform the exercise with precision and concentration.

The "theatre task" was very similar in the Berkeley and Trondheim performances, and asked players to pick a by-passer on the street, study her movements and then, in groups, impersonate them and create three different family pictures and then their corresponding transitions until creating a short sequence of movement where the story of this family relations is made explicit. Here the smartphones were used to take pictures and videos that helped players structure the exercise, served as proof of having completed it and also as documentation to use in the final performances. In this way, ubiquitous media helped players structure and complete the different stages of the two-stage exercise, taking the role of the instructor that guides participants and validates their actions through a complex theatre exercise.

The "literature task" was a social improvisation exercise that asked players to engage in conversation with strangers on the street and get them to say the word "fantasy" in a sentence. Players had to record the sentence in their smartphones, or write it down in the paper map and memorize it, since it would later be used as the main text for the final performance. In this way, ubiquitous media became important for remembering the material for the upcoming final devised performance in short form, and hence also for fulfilling all game tasks.

4.3 Devising Multimedia Performance

All the materials collected from the checkpoints were fundamental for devising the last performance pieces, but in what way were the ubicomp technologies essential in this final stage? Here, digital materials were added to the scenography of each groups' performance piece as shown in Figure 23 and 24. The most popular projection was the "digital sign" since—by using Google maps and other functions in the *Everytrail* program—the technician could project the map as moving images instead of a single-static image. The "zoom in" function of Google maps allowed him to start off each

performance piece with a panoramic of Earth and slowly zoom in to Trondheim until the digital sign became clear and visible. He could also slowly recreate the route from beginning to end, provide visual information on the route (i.e. length, speed) and merge routes from different teams, forming a joint sign.

Figure 23: *Chain Reaction*, Trondheim, 2011. A moment during a group's performance, where their digital drawing is projected in the background. Photography: the *Chain Reaction* team.

Figure 24: A moment during another group's performance, where their digital drawing is projected in the background. Photography: the *Chain Reaction* team.

The projection of collected materials contributes to creating a sense of "owned material" in players that feel more comfortable of their performances. Furthermore, the enhancement of their very own materials through technology (real time manipulation and enlargement) wows participants and encourages them to perform. In a sense, the technological apparatus supports their performances and encourages them to continue.

Players themselves suggested how to use ubiquitous media in the final pieces. For instance, the group "Zezinho" asked whether they could play the music track they used for the "mirror task" as soundtrack for their performance piece. A player from the group "The Walrus" spontaneously recorded her partner while completing the "mirror task" and suggested projecting it during the performance piece. What this shows is that using ubiquitous media in pervasive performance fosters emergent behaviour in players and creative expression. Players rapidly invented ways to use media in a manner that it could contribute to the aesthetics of the performative event.

5 Further Discussion

Until now I have described the ways in which we implemented ubiquitous media and analysed what was achieved through them in the performance. I will now discuss how *Chain Reaction* might challenge theatre conventions of spectatorship and participation by enabling game participants going through different participatory roles during one and the same event.

Benford and Giannachi (2011) note how in *mixed-reality performances*—a similar concept to *pervasive performance* that focuses on the combination of real and virtual elements—participants collaborate and are cast into a diverse range of roles, that go from performer, to spectator and even orchestrator (175). For instance, in *Fairground: Trill Laboratory* (Walker 2006), participants could be selected to be "a rider" wearing a telemetry system, or be part of the audience watching the data produced by the telemetry system, or an "expert presenter" showing the results. In this case, we see clearly delimited roles where a participant is invited to perform the same role throughout the whole event.

Benford and Giannachi also note how, in other performances, audiences are encouraged to move from different roles within the same work, gaining perspectives on a given experience (7). In *Rider Spoke* (Blast Theory 2007), there are elements of *performance* while participants cycle through the city streets, but also of *authoring*, as these riders are able to create the content that other participants will listen to (*as spectators*) as the piece progresses and grows over time (191). In their view, the transportation from participant to performer arises very naturally thanks to the city space that affords participants *playing*—carrying out actions, while simultaneously *performing their playing*—displaying their carrying out of actions to an audience or bystanders. Montola et al. (2009) unite these two roles as "performative play" and argue that players might focus more on "playing" or focus more on "performing" in order to overcome embarrassment and achieve a comfortable place—a very personal choice that happens in a fluid manner (126).

In *Chain Reaction* we offered three roles that all participants would experience; spectator, performative player and actor (in the theatre sense)—and one role that only those who engage with documentation after the event might experience, that of documentalist. The difference between player and actor is here understood as the former being an agent in a game and the latter being a performer on a stage.

First, *Chain Reaction* starts with a classic theatre set up where actors and spectators are co-present, either in a public space (Berkeley performance) or inside a theatre house (Trondheim performance). At the end of the theatre introduction, the professional actors—still in character—explain game rules and hand out maps and smartphones to "players". This exchange of "play materials" between actors and spectators marks the first transition of the spectator into player, who is being activated and welcomed into a more active role in creating the event. The value and significance of this moment is that of exchanging the power "tools" from the authors to the players; it is a kind of invitation by which spectators are being asked to take over control and responsibility over their actions from that moment onwards. In an interview, Matt Adams and Nick Tandavanitj (2011) argue the technological devices *per se* imprints a degree of authority in players who will feel empowered to play and act while the device is in their hands. In their view, the smartphone acts like an "objectifications of the game goal", as if to say, "I'm playing a game, and here is my device" (202). *Chain Reaction* confirms this notion of empowerment through technology in how all players completed the Trondheim game, as opposed to the Berkeley event where three players out of fifteen dropped out. However, it could be argued that Trondheim players were more engaged through technology than Berkeley players because Trondheim players were obliged to return the smartphones to the organizers at the end of the event, which forced them to complete it, while Berkeley players were using their own mobile phones and could therefore leave any time. Although it is hard to say to what extent exactly the smartphone prompt spectators into action, it can safely be said that it was a combination of game rules *and* to an extent, the tools to play with—the paper maps, the prop (fake moustaches) and the smartphones.

Second, during an average of two hours players are dispersed in the city where—by completing three tasks in the public space—they slowly build a sense of skill, a sense of courage and a repertoire of material inspired in the environment that is intimately close to them. The game in the city empowers participants to perform artistic actions in public space while simultaneously prepares and encourages them to act in the final performance. By taking the event out in the streets and aiming at making theatre out of ordinary actions that take place in the city and routine every-day activities, the event advocates theatre that is closer to people and takes place outside of the institution of theatre as power.

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Third, when players arrive in the last checkpoint—the theatre house—they encounter the same theatre situation from the start, but reversed. They are instructed by the actors to create a short performance using the materials they gathered in their trip across the city and to perform it to the rest. What affords the transition from player into theatre actor, we would argue, is how they are welcome to occupy the stage immediately at their arrival while the professional-theatrical actors vacate the stage. Benford and Giannachi argue "there is a need to make room for this "new class of public performers" (176). For the newcomers to gain weight and feel more empowered to take the stage—after having taken the streets—the conventional theatre roles need to be reversed. *Chain Reaction* contributes to the development of this new class of public performers by staging participants and placing the professional actors in the audience space as shown in Figure 14 and 15. By making the role reversal explicit for everyone to see, *Chain Reaction* places the value of the event on the participants' performances alone, challenging mainstream theatre conventions where audience participation is often partial and seldom lies entirely in the hands of participants alone.

Figure 25: Working on the stage. As groups return to the theatre house, they are instructed to join another group and together, devise a short performance by combining the materials they gathered in the checkpoints earlier. Photography: the *Chain Reaction* team.

Figure 26: A playing community. Actors (sitting on the left) share the audience space with players while a group performs on stage. Photography: the *Chain Reaction* team.

Chain Reaction's performance system also contributes to develop this new class of public performers by providing them with their own materials to act with. Contrary to mainstream theatre conventions where the actor seldom generates "her own" stage material, participants present an "owned" material—collected by themselves in the previous stage of the event—with which they have a strong relationship with.

The game moments in the city that lead up to the big performance finale have a crucial value for preparing players into free and spontaneous forms of acting. The technique of using games to facilitate creativity and spontaneity in professional actors is common practice in both alternative and mainstream theatre circles, where improvisation is used as a strategy to develop creative work. *Chain Reaction* challenges these conventions by combining game design and performance to help *participants* improvise and act rather than to help the professional actors.

Chain Reaction's aim of engaging *everyone* attending the event challenges mainstream theatre conventions where normally participation is designed for a selected few. This way of sharing between fellow members of a playing community, so to speak, is close to a ritual understanding of *communitas* (Turner 1982), where players and audience reverse roles in a safe and local, agreed environment. This

understanding of theatrical communication challenges notion of the theatre event, where the audience often appears from "the outside" and is not part of the playing community.

The role of documentalist is one that documents her playing, online from home, if/when she uses social media. This also is unfamiliar to mainstream theatre conventions in the way that this role offers possibilities for documenting the whole event from the players' perspectives. In events where most of the action takes place in the city and across different platforms, players are the only ones that have access to the totality of the event. The documentation is here a cultural dimension that processes the experience differently and in a more dynamic way than just participating in a performance.

Chain Reaction offers ways of crossing the threshold between different forms of creative participation during one cultural event instead of being limited to an assigned and fixed participatory role (which we often find in most theatre and game genres). We will argue that this constitutes a particular aesthetic quality of pervasive performance as genre. By this form, participants get to try themselves out in different roles, *getting a taste* of what each role is like. In this way participants are empowered as members of a community, in different ways. Some players focus on playing and enjoy completing a variety of goals; others enjoy the performative aspect of playing in public, while others are thrilled by the experience of acting their own creation on a stage (and receiving acclamation). Finally, the documentary producers appreciate a level of mediating and understanding the event. We found our selected ubiquitous media to be important means to realise and maintain pervasive performance as genre. The ubiquitous media do not provide transitions between roles alone, but do so by a combination of elements in the performance system such as; framing the event as a game, using the public space as material for art making and its bystanders as audience, and staging the performing player (as actor) by including ubiquitous media when it is appropriate. Launching the documentalist is but one important contribution form ubiquitous media. Therefore we suggest that digital media is important to forms of cultural and aesthetic performance, not only by enriching set design and dramaturgy in mainstream theatre, but also by allowing new and democratic forms of cultural performance where participants' role is vital in the creative process. The challenge of this as "art" form—from a theatre perspective—is to establish an alternative set of qualitative criteria that not only puts players and their experiences in

the centre but also considers its presented forms as qualitative forms. The multimedia performances may not match the standards of the theatre establishment, yet they have the value of exposing "amateurs" concern with aesthetic forms.

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[1] SFZero is an online collaborative game platform based in the San Francisco Bay area. Members earn points by completing game missions in the real world, and then documenting their actions online. Documentation not only serves as proof of the playing activities in the real world but also has game value in itself: the better the documentation, the more points it scores in the SFZero game world.

[2] The performance pieces were absurd and satirical proposals to co-opt human life, with titles such as How to Talk to a Young Revolutionary, Corporate Flowers and Domination Science.

[3] See Jane McGonigal's discussion on ubicomp games, and more specifically, her criticism on Blast Theory's *Can You See Me Now?* Pp. 139-147.

Acknowledgments

References:

Aarseth, E., 2004. We all want to change the world: the ideology of innovation in digital media. In G. Liestøl, A. Morrison, & T. Rasmussen, eds. *Digital media revisited: theoretical and conceptual innovation in digital domains*. Cambridge, Mass.: MIT Press, pp. 415–440.

Adams, M. & Tandavanitj, N., 2011. Performing trajectories. In *Performing mixed re ality*. Cambridge, MA: MIT Press, pp. 201–206.

Allegue, L. ed., 2009. *Practice-as-research: in performance and screen*, Basingstoke: Palgrave MacMillan.

Allen, H.A., Johanne Kortbek, K. & Grønbæk, K., 2008. Mobile urban drama: setting the stage with location based technologies. *Sprinter*, pp.20–31.

Balme, C., 2010. Distributed aesthetics: performance, media and the public sphere. In J. Limon, ed. *Blending media*. Gdańsk: Theatrum Gedanense Foundation.

Benford, S. et al., 2006. Can You See Me Now? *ACM Transactions on computer-human Interaction (TOCHI)*, 13(1), pp.100–133.

Benford, S. et al., 2003. Coping with uncertainty in a location-based game. *IEEE Pervasive computing*, 2(3), pp.34–41.

Benford, S. & Giannachi, G., 2011. *Performing mixed reality*, MIT Press.

Benford, S. & Giannachi, G., 2009. Temporal convergence in shared networked narratives: the case of Blast Theory's Day of the Figurines. *Leonardo. Project Muse.*, 42(5), pp.443–448.

Blast Theory, 2007. *Rider Spoke*, Available at: http://www.blasttheory.co.uk/bt/work_rider_spoke.html [Accessed February 7, 2012].

Dean, R.T. & Smith, H. eds., 2009. *Practice-led research, research-led practice in the creative arts*, Edinburgh: Edinburgh University Press.

Dixon, S., 2007. *Digital performance: a history of new media in theater, dance, performance art, and installation*, Cambridge, MA: MIT Press.

Freeman, J., 2010. *Blood, sweat & theory*, Oxfordshire: Libri Pub.

Fullerton, T., Swain, C. & Hoffman, S., 2004. *Game design workshop: designing, pr ototyping and playtesting games*, San Francisco, USA: CMP Books.

Giannachi, G. et al., 2010. Blast Theory's Rider Spoke, its documentation and the making of its replay archive. *Contemporary theatre review, Taylor & Francis*, 20(3), pp.353–367.

Giannachi, G. & Benford, S., 2008. Temporal expansion in Blast Theory´s Day of the Figurines. *A journal on performance and art, MIT Press Journals*, 30(3), pp.60–69.

GlobalMotion Media, 2010. *Every Trail*, Available at: http://www.everytrail.com/ [Accessed February 9, 2012].

Improv Everywhere, 2004. *The Mp3 Experiment 2.0*, Available at: http://improveverywhere.com/missions/the-mp3-experiments/ [Accessed July 2, 2012].

Lehmann, H.-T., 2006. *Postdramatic theatre*, London: Routledge.

Løvlie, A.S., 2010. *textopia: experiments with locative Literature*. Thesis (PhD). University of Oslo.

McGonigal, J.E., 2006. *This might be a game: ubiquitous play and performance at the turn of the twenty-first century*. Berkeley: University of California.

Montola, M., Stenros, J. & Waern, A., 2009. *Pervasive games: theory and design*, Burlington, Mass.: Morgan Kaufmann Publishers.

Perez, E., 2009. Chain Reaction. Available at: www.elenaperezrodriguez.com [Accessed April 30, 2012].

Playtime, 2006. *SFZero*, Available at: http://sf0.org/ [Accessed February 9, 2012].

Riley, S.R. & Hunter, L. eds., 2009. *Mapping landscapes for performance as research: scholarly acts and creative cartographies*, Basingstoke: Palgrave MacMillan.

Turner, V., 1982. *From ritual to theatre: the human seriousness of play*, New York: PAJ Publications.

Waern, A., 2009. Information technology in pervasive games. In M. Montola, J. Stenros, & A. Waern, eds. *Pervasive games: theory and design*. Burlington, Mass.: Morgan Kaufmann Publishers, pp. 163–174.

Walker, B., 2006. *Fairground: Thrill Laboratory*, Available at: http://www.aerial.fm/ [Accessed July 9, 2012].

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Article 3:

'Experiential Documentation in Pervasive Performance: The Democratization of the Archive'

Experiential Documentation in Pervasive Performance: The Democratization of the Archive

Abstract: The use of digital media has impacted both contemporary performance practices and performance documentation strategies. The category of pervasive performance poses numerous challenges to performance documentation due to its *participatory*, *mobile* and *distributed* nature. In this article I shall use my experience documenting the case study of *Chain Reaction* (Pérez 2009; 2011) to propose alternative solutions to these challenges.

My hypothesis is that in a situation where participants are increasingly documenting their own actions across platforms in the mediasphere, practitioners can foster the transformation of the participant into documentalist as part of the cultural event through game design strategies. I then discuss the challenges and possible value of archives created out of the collaboration between participants and designers.

Keywords: collaborative archive, documentation, experience, game design, participation, pervasive performance

1 Introduction

Since the 1990s, the rise of digital media has impacted society in multiple ways. In the field of performance documentation, the use of media is bringing forth new possibilities and challenges, making it a thriving and contested field of study and practice. Some examples are Merce Cunningham's capture of hand performances in 1998 and the pioneering research project to document multimedia performance carried out by the *Digital Performance Archive* from 1999 to 2000 in the UK (The Nottingham Trent University 1999). The diversity and hybridity of contemporary performance practices in technologically applied culture today challenge theatrical conventions of time, space, interaction and participation, giving birth to new emergent genres. There is a need to design new documentation strategies that can reflect their complexity and hybridity.

One of the genres pushing for new documentation methods is "pervasive performance", an emergent genre born out of the convergence of the fields of ubiquitous computing, experimental game design and performance. I have defined it

elsewhere as a "mixed-media event that combine(s) gameplay with performance (...) for collaborative art making in public spaces" (Pérez 2014). Pervasive performance shares many aspects with pervasive games,[1] such as how it takes place in public space or aims at mixing with everyday life as part the aesthetic of the work (hence the 'pervasiveness'), but pervasive "performance" adds a focus on performance and art making as the main aim of the event, a focus that pervasive games normally lack.

Pervasive performance challenges performance documentation in two ways. First, due to its *mobile* and *distributed* nature, it forces the creation of alternative capture strategies for multiple, mobile participants situated outside the enclosed space of a theatre house. Second, due to its *participatory* and *interactive* nature where the focus of the work shifts from the performers to the playing audience, it forces a change of documentation paradigm that puts the audience in the centre of documentation. New media art theorist Lizzie Muller (2008) points out that this shift towards the audience also corresponds to a paradigm change from documenting "objects" (whether the object may be the author or the spectator) to documenting "experiences". In this way, she claims, "documenting audience experience is both one of the greatest challenges and one of the most promising new directions in the documentation field" (1). She further explains the importance of audience accounts:

> *All experiential descriptions from individual audience members will offer partial accounts of a work, presenting some aspects that the artist would hope to see and also inevitably other aspects that the artist may not have imagined. The partial accounts capture the vibrant, living generative existence of the work. (2008, p.4)*

So, while using audience accounts for the creation of the archive has its limitations (the accounts are partial) and its benefits (the accounts reveal unintended aspects of the work), such a practice can capture a sense of liveness that cannot be matched. In this article, I will discuss how the two challenges mentioned above can be solved. First, I will explore how to capture performances that are mobile and distributed in public space in the most efficient way and second, I will discuss how to create archives that document audience experience. To do so, I will use my experiences documenting a piece of pervasive performance named *Chain Reaction*, a performance experiment developed by myself and a team of collaborators as part of my Ph.D. project.[2] *Chain Reaction* takes a "player-led approach" to documentation,

where participants capture the event with their own photo cameras or mobile phones as they hunt for clues in public areas around the city. Following the performance event, participants then submit the documentation to online platforms such as *SFZero* or Facebook. *Chain Reaction* has been publicly performed three times, once in Berkeley in October 2009 and twice in Trondheim, Norway in May 2011. In this article, I will use the data and experience of documenting the Berkeley performance, including the documentation carried out in the two playtests that were arranged prior to the public performance in Berkeley.[3] The documentation was carried out differently in Trondheim, where I tried to implement some of the experiences with *SFZero*, but I will not further discuss the experiences from Trondheim as it exceeds the limitations of this article.

The *Chain Reaction* case study is not a refined and settled system of performance documentation, but rather, it is a preliminary model that I have learned from, as it offers alternative solutions for discussion and reflection.

The questions to be addressed here are: *How can authors and participants jointly document performances in a way that reflects the experiential and collaborative nature of pervasive performance? What are the possible values of such archives?*

2 The Archives in *Chain Reaction*

Chain Reaction is a hybrid form of participatory performance and pervasive game that seeks to engage participants into making theatre in public spaces. It has a set performance system – or game model – that structures the performance. This core structure remains the same in every orchestration, and it is as follows: The event starts off with a classical performance setting inside a theatre house or in the open (a park or plaza, for example) where actors perform a short theatrical introduction, explain the game rules and hand out maps and mobile phones to the audience. On the map, there are three to four checkpoints marked. Participants (or players) organized in groups of two to four must visit all the checkpoints. At each checkpoint, an actor ("dressed up as a corporate agent") delivers a task for the players to complete; e.g. "make a ten second movement sequence inspired by the environment that includes a jump, a spin and a fall". Once the participants complete all the tasks, they are instructed to go back to the starting point where they are asked to use the materials gathered at the checkpoints such as a piece of text, a pattern of sound, a sequence of movement and a

theatre sculpture, and cross-hatch them into a short performance piece. Every group performs its piece for the rest of participants – other players and the orchestrators – and there is a final and informal vote to decide on the "best" show, whereby the "winners" gain a symbolic trophy and the others get a souvenir badge. Once the event is over, participants are encouraged to document their experiences through text, pictures and videos, either on the official blog of the event (Perez 2009), on a game and performance website named *SFZero* (Playtime 2006), or on social media such as Facebook (only in the Trondheim events).

The official blog of the event (Pérez 2009) is a "designer-led archive" where all the materials created by the organizers are posted. In the blog there are, on the one hand, the documents created by the designer, such as a description of the event, game rules, game narrative, the designer's intentions and the missions to be solved at the checkpoints. On the other hand, there is also experiential material of participants captured from a third-person perspective. These are pictures and videos from all participants at the beginning and end, the most relevant being the videos of each team's final performance piece. The positive sides of the official blog are the following: it is open access for anyone and it is easy to navigate, since most users are familiar with blogs. The limitation is that even though users have the possibility of "leaving comments" to the designer's posts (in the form of text only), they do not have the possibility of creating their own posts in it. In this sense, the blog options for users' creative documentation are limited.

As *Chain Reaction* was documented in a platform named *SFZero*, it is necessary to describe it. *SFZero* is an online collaborative game and performance platform developed by an open source group of experimental game designers in San Francisco, USA (Playtime 2006).[4] It is also a game and an archive. It is a game where players complete tasks and document their accomplishments by posting them online. Users pick a mission and go out into the real world to complete it, for which they score points. Then they document their mission on the online platform, and this also earns them points awarded from other users. One of the goals in *SFZero* is to advance from Level 0 to Level 8, and this is achieved by accumulating points from completed missions, and posted documentation.

However, *SFZero* players are also *SFZero* 'designers'. This is because they are also encouraged to create missions for others to complete, for which they receive points. In this sense, *SFZero* participants are *produsers* (producer + user) as they

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actively 'produce' missions for others to complete while simultaneously 'use' missions created by others. The concept of the produser is helpful here as it describes an agent that alternates between the two roles (Bruns 2008; Lessig 2008).

The documentation standards are explained in the website as follows:

> *"The pathological striving for pleasure is located in the formal space of duty."*
>
> You must submit proof in order to earn points from completing tasks. This just means that you must document what you are doing for the game in any way that feels appropriate to you. *Innovative documentation* is the key to successfully playing the game. Taking pictures, making audio or video recordings or writing about what you have done are all acceptable and probably convenient forms of documentation, however, there are no limitations or restrictions on documentation. You may do it however you please and you'll find that the best documentation format will vary depending on the task.
>
> Don't forget: the public life of your character is constituted largely by the proof you submit. If you fail to document your progress *creatively* your character will appear inept and foolish to the other residents of San Francisco (emphasis mine).[5]

The criteria for good documentation are based in abstract concepts such as "innovation" and "creativity", and more straightforward rules, as the designers recommend the use of pictures, audio, video recordings and/or text. They acknowledge documentation as a form of labour – a duty – and make it part of the game mechanics to create positive motivation for submitting.

SFZero can also be understood as a "player-led archive" that contains experiential accounts of the community's activities, and it that has efficiently been documenting games and performances since its creation in 2006. The archive uses audience members as the main source of information, documenting how the event occurs for them. These two characteristics coincide with Jones and Muller' understanding of an "experiential approach" to documentation (2008, p.418). *SFZero's* strength is in the ways it has created a thriving and dynamic collaborative community that updates and feeds the online platform with new tasks (missions) and documentation (content) over time. To do this, participants have used low-tech, domestic technologies such as mobile phones and digital photo cameras for capturing

mobile and distributed performances. This is useful to our analysis as it provides a very realistic understanding of "what can be done" rather than "what could ideally be done". The problem with *SFZero* is its limitations as an archive. First, access to the archive is restricted to community members. Second, the documentation can only be accessed through each player's personal subjective story. In this sense, it lacks other ways of entering and navigating the material that would make the archive appealing to publics outside of the game and performance community itself.

3 Challenge One: Performance Capture

In this section, I will go through three consecutive attempts to capture the distributed event of *Chain Reaction*. The first attempt was during the first playtest, the second attempt occurred during the second playtests, and the third attempt was made during the public performance.

3.1 Video Ethnography: Recording "A Bit of Everything"

To document the first playtest, my team (which included myself and two camera operators) decided to use a third-person perspective, video ethnographic approach to capture the event, video recording a bit of everything (Mohn 2006). The camera operators were set to capture the beginning and end of the performance with their video cameras, which were the two moments when all performers and participants were physically co-present. The camera operators were also asked to pick one team of participants to follow throughout the event. To document the checkpoints, we asked the actors in charge of delivering the missions to take pictures and videos with their mobile phones when or if they got the chance. Our intention was to capture both actors and participants' actions and interactions in the beginning and some parts in the middle and end of the event, which would enable us to reconstruct a comprehensive overview of the performance. Our specific intention was to document the changing relationship between professional actors and participants throughout the performance, since *Chain Reaction* starts by framing participants as audience and ends with a role reversal, where the actors watch the participants' performance pieces.

The problem with this approach of capturing "a bit of everything" was that it was highly ineffective. The beginning and ending were very well captured by the camera operators, but the middle of the performance – the journey from checkpoint to

checkpoint – was almost entirely missing. The reasons for this were the following: First, the camera operators' equipment was heavy and this made it difficult to easily follow a team of participants who were running around –they repeatedly lost track of the teams they were supposed to be recording. Also, the camera operators grew exhausted after following the teams for hours, and they could not keep up with the players' rhythm. And finally, the participants actively tried to lose the camera operators, as they felt being tracked was somehow detrimental to reaching the game goals. Since some of the missions were social improvisations (the 'sound' mission asked participants to ask strangers on the street to sing their favourite songs), participants felt that having the camera operators record them scared passers-by away by drawing too much attention. To solve this, the camera operators decided to wait for players to arrive at a particular checkpoint. As for the actors on location, they ended up not documenting anything, since they were busy interacting with the participants and passers-by who became curious about what was going on.

3.2 Focusing on Set Locations

To capture the second playtest, we decided to focus on capturing the interactions and performances happening in the fixed locations only: that is, we restricted video capture to the beginning, end, and all the checkpoints and this resulted in good quality video material. However, we felt the compelling parts of the performance were not being captured since most of the interesting things happened while participants walked from checkpoint to checkpoint, when they were away from the orchestrators. This is something we learned from participants themselves as they referred to "the best moments" happening as they traversed the city and mostly as they interacted with strangers. Another issue we had not anticipated was that, in half of the cases, participants walked away from the checkpoint to complete the mission instead of staying in the location where it could be properly video-recorded. Once the mission was completed, participants would return to the checkpoint to meet the actor, tell her about how they completed it to get it validated, and move on to the next checkpoint. This behaviour resulted in abandoned actors (and camera operators) on location who did not capture the ways in which participants solved the missions (or in some cases, were only able to see the activities from far away).

Therefore, we calculated that if *Chain Reaction* lasted an average of 3.5 hours, by capturing locations we got access to 1.5 hours of material – the beginning and end of the performance plus the check-ins at the checkpoints. This meant that players were left on their own doing things that were not captured over 50 per cent of the time, which, in addition, seemed to be the "highlights" of the event.

At this point, we understood that participants' actions – when not in the presence of orchestrators – needed to be included, and even prioritized. But how could we get access to most of the teams' stories? How would we be able to gain insight into that pool of data?

3.3 Fostering Documentation by Participants

To address the issue of gaining access to the remaining 50 per cent of the performances, we discussed the possibility of having one camera operator per team, but this was quickly dismissed due to lack of resources. Instead, we designed three different strategies that were executed during the public performance.

Our first strategy was to provide camera operators with lighter equipment and asked players to agree to have a camera operator follow them only for a short period of time, promising that every team would be followed by a camera operator for a similar amount of time at some point during the event. Participants were satisfied with this, since they thought it solved the inequality of only one group having the camera operators following them. This way, thanks to the camera operators' dynamic shifts among teams, we finally got an external perspective to what participants were doing and how they were solving missions. These recordings revealed themselves to be extremely interesting as they showed the struggle to complete the missions, how the participants collaborated and made decisions, and how they interacted with the surroundings.

Our second strategy was to encourage participants to document their experiences with their own mobile phones and then incorporate this 'amateur' material into the author's archive. This was informally arranged between a player and myself after I saw her taking pictures of other players during the event. Our third strategy was to make *Chain Reaction* be part of a large community for pervasive gaming and performance, *SFZero*. This happened because I had become member of *SFZero* myself after playing a street game named *Journey to the End of the Night* in

San Francisco earlier that year (Kizu-Blair, Mahan, and Lavigne 2006; Løvlie and Pérez 2009).

Chain Reaction became part of the SFZero catalogue of missions, so that by completing the Chain Reaction mission and documenting it in the SFZero platform, participants would get points to cash in within the SFZero community. Out of the fifteen participants in the public orchestration of Chain Reaction, ten of them belonged to the SFZero community.

The decision to include Chain Reaction in the SFZero catalogue of missions had a decisive beneficial consequence for performance capture in that players themselves used their own mobile phones to capture their actions while they wandered around the city, which easily accomplished the goal of recording this phase of the performance that we had formerly struggled to achieve. A week after the performance date, two teams submitted documentation to the SFZero platform (however, nothing was submitted to the author's blog, even though they were encouraged to do so). In the documentation, two teams thoroughly described how they solved the missions, making a full account of their experiences in Chain Reaction, using the pictures and videos they had captured while playing.

Participants played Chain Reaction, but they also documented it to gain points in the SFZero game. In a sense, they played for two different purposes – simultaneously playing a game and performing in a performance. The SFZero strategy was beneficial to Chain Reaction as it not only provided a community of playful participants, but most importantly, it added an incentive for participants to capture their own actions with their own gadgets and fill in the gap that the designers of the game could not.

4 Challenge Two: Arrangement of Material

After capturing these performances, the question then becomes: How shall we arrange all this material? What type of archive is then built on such collaboration after capturing such an event?

In the article "Between real and ideal: documenting media art" (2008), Jones and Muller present a holistic approach to documentation that combines the representation of "real" experiences of the work by audience members and "ideal" representation of an artwork by the artist (which generally aims to display "the

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essence" of an artwork by focusing on the artist's intentions). In their view, 'there is a productive tension between "real" and "ideal" versions of the artwork, as each approach challenges the authority of the other in useful ways, offering complimentary information and therefore creating a richer, deeper and more complex overall picture' (418). Following Jones and Muller's line of thought, both approaches should be accommodated in the archive so that the productive tension can be brought forward to construct a more complex overall picture.

4.1 Performance and Gameplay as Archive Principle

Using participants' experiences as the basis for constructing the event's archive implies that we are using performance and gameplay as the archiving pattern. That is, players themselves decide which parts of the event are worth capturing, doing the job of filtering and selecting their own personal "highlights" of the event. Since these "highlights" are subjective accounts, they may differ from the artist's understanding of what the most relevant parts of the event might be.

In *Chain Reaction*, we see this tension between the perception of the audience and that of the author. For example, neither of the two participant stories in *SFZero* gave much information about the final performances; instead they focused on describing how each mission was successfully completed as they walked across the city. As creator/designer, I considered the final performances as the most important part of the event because they had value from a theatrical point of view: roles had been reversed and it was participants who acted – in the theatrical sense – to an audience composed of other participants and traditional actors/performers. In contrast, participants gave more value to their own creative ways of solving a mission throughout the event and did not consider the final performances to have a value above the rest. Here, we very clearly see the difference between the "ideal" approach to documentation (the essence of the work seen through display of the author's intention) and the "real" approach (how it is experienced by the participants). The designer prioritizes the intentions and the way they challenge the theatrical field, while participants prioritize their own subjective experiences, regardless of whether these fit the designers' intentions or not.

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4. 2 Quality of Audience Documentation

In the following section, I will argue that if practitioners create the conditions of possibility for participants to become documentalists, then the documentation can reach a high standard. In this way, it is the designers' purview to facilitate this expansion of the role of the audience from active 'participants' into active 'documentalists'.

In the official blog of *Chain Reaction* (Pérez 2009), the documentation displayed was: narrative, text that explained the event and game rules, a short edited performance video clip that summarized the narrative of the event (which showed the actors and how they conveyed the narrative), and three short edited clips with participants' final performances: 'How to talk to a young revolutionary', 'Domination science' and 'Corporate flowers'. In addition to the videos, there were some pictures of both participants and performers from the beginning and end of the event, and pictures from the checkpoints (middle part of the event) that the camera operators had captured in the fixed locations.

The documentation by participants was submitted to the *SFZero* platform – not to the official blog for *Chain Reaction* – and consisted of a collage of texts, videos and pictures (taken with participants' mobile phones and digital photo cameras). In these collages, the participants constructed full, linear stories that thoroughly described their experience in the event as shown in Figure 16. These stories used the participants own images but they also employed documents provided by the authors during the performance, for example, the pieces of paper where the missions where printed out, or the paper map.

PLAYERS TASKS PRAXIS TEAMS EVENTS

about   territory   terms   badges   groups   donate

50 + 43 points

Chain Reaction: Berkeley by firecracker, Beetle bomb, Spidere
November 16th, 2009 11:24 PM

INSTRUCTIONS: *It's year 2020. Berkeley has been successfully privatized down to the very last brick. The University now only accepts students that are guaranteed to contribute directly to the global economy – that is, students of Business, Economics, Engineering and Law. Degrees such as History, Literature, and Journalism have disappeared. The University is now a corporation.*

Chain Reaction is a playful mix of street game and performance

full instructions

firecracker
Level 2: 103 points
Last Logged In: November 5th, 2009

View firecracker's:

- Completed Tasks
- Grouposis
- Relations
- Votes
- Player Photos
- Texts
- Favorites
- Terms

Ah Berkeley in 2020. Glorious Capitalization on every corner, what could be better then spending an afternoon helping to solidify and sing the praises of complete corporatization? That's just what agents Spidere, Beetle bomb, and Firecracker set out to do.

After getting a bit lost on BART and again on the street we came to Sproul Plaza, where we were to find the CEO of the Berkeley Corporation. In 2020, the corporatization of Berkeley was complete, and the naysayers had fallen. Still, though, there were things which the corporation had failed to assimilate and make profitable. Thus, our mission.

We were to gather field research to find out what was on the minds of Berkeleans. We were to tell no one of our mission. Beetle bomb and Firecracker formed one team; Spidere teamed up with a random non-player, Justin. Our tasks:

Checkpoint "WORDS"
at Telegraph and Channing

Find a stranger on the street and engage him/her in conversation, and get him/her to say the word "corporation" in a sentence, and then note down the sentence which he/ she said. That is a sentence that you will use later in the game. Once you get it, go find the Corporate to sign your map.

- It MUST be someone who is not in the game
- You MAY NOT tell the person that you are playing a game.
- You MAY NOT yourself say the word "corporation".
- You MAY NOT tell the person what to say, or write it down for them, or anything like that.
- You MAY lie, make up stuff, and improvise in any way to get them to say the word

Spidere: This was the most difficult task...sprinting around, frantically trying to get someone who knew that CPB stood for the Corporation for Public Broadcasting (apparently, no one knows where NPR and PBS

Figure 27: Documentation of *Chain Reaction*, Berkeley, 2009. First part (out of three parts) of the documentation piece by players 'Firecracker', 'Beetle Bom' and 'Spidere' that combine text, pictures and videos, to describe how they completed all the missions.

When comparing the documentation carried out by myself and the documentation carried out by the participants, it became clear that the participants' documentation was more elaborated and complex than my own. I had simply gathered materials and posted them online while participants had put an effort into presenting and displaying theirs creatively.

Game and performance theorists Jane McGonigal (2006) has discussed the game platform *SFZero* and the documentation that it produces, stating that "documentations of completed missions are displayed online or at real world meet-ups where the evidence is scored and cheered by other players" (375). Documentation is here understood as "proof", and serves the function of "determining which team achieved the most dramatic intervention", being used mainly to determine the winners. However, the elaboration and complexity of the *Chain Reaction* documentation suggests that initially, documents of proof may have been used as a practical way of establishing the winners, however, those "proofs" have since developed into narratives with an aesthetic value in themselves. The aesthetic quality of the stories can be explained by how they are crafted to address *SFZero* standards. On the one hand, they have to contain pictures, videos and text, and on the other hand they must be "creative" and "innovative". For this reason, documenting the performance was not only about capturing or tracing the veracity of what happened, but was also about *how* to document what happened *creatively:* players were preoccupied and concerned with documentation as an aesthetic form – as an expressive, creative act in itself.

Scholars in the field of documentary film and video have extensively discussed whether documenting is a truthful (objective) act or more of an interpretive, creative act. While some theorists advocate the capacity of the documentary film to represent 'reality', others prefer a more careful approach and argue for film's capacity to only 'say something about reality' through creative means (Nichols 2001; Sørenssen 2001).[6] *Chain Reaction* documentation in *SFZero* reflects the view that documentation is a subjective construction that uses a (game) mode of representation.

4.3 Two Separate Platforms?

The resulting archive of *Chain Reaction* was distributed in two separate online sites. One was the official site where all the materials created and collected by the designer

were uploaded. Even though I encouraged players to post documentation on the blog, no one did. The blog had many views, but did not generate any comments by users. The other site was the *SFZero* platform were players posted their stories. The stories generated comments from other *Chain Reaction* players as well as from members of the *SFZero* community who did not play *Chain Reaction* but still wanted to vote on the documentation. The designer and orchestrators, who were also members of the *SFZero* community, also commented on the documentation posted on the *SFZero* webpage only. This was because the conversations were taking place in the game community and not on the designer's blog.

The two platforms remained separated but connected by making references to each other. For example, I posted a link to *SFZero* offering "participant accounts" while participants' stories instructed readers to go visit the *Chain Reaction* site where "the videos of the final performance should be available soon" (Firecracker, Beetle Bom, and Spidere 2009). This de-centralized quality challenges the idea of the archive being a self- contained unitary object with a physical geography formed by different types of documents, and understands it as one lot even though it inhabits different platforms. On one platform, we have the author's documents (in the form of text, pictures and videos) and on the other platform, we have participants' documents (contextualized stories that use initial pictures and videos) together with user annotations (comments to the stories by online users). This de-centralized archive locates the documentation of the event in the mediasphere, where it is dispersed "without geography or container" but is also united by an event or idea (Batchen 1998).

However, even though the two platforms existed, only one was active (meaning that it generated conversations), while the other was only viewed (not generating any conversation). In a sense, it can be said that even though both sites were active (in different ways) one concentrated most of the attention.

Perhaps having the two platforms united in one would facilitate the navigation of material and also, as Jones and Muller (2008) have argued, would generate new meanings through the juxtapositions of the designer's approach and the participants' approach. Currently, there is an archive tool that does precisely this by accommodating "real" and "ideal" materials from different agents. It is called CloudPad (Giannachi et al. 2010; Chamberlain et al. 2010; Giannachi et al. 2012) and it has been developed by researchers from the Universities of Nottingham, Sheffield,

and Exeter in partnership with British and Stanford Libraries and the Ludwig Boltzmann Institute between 2009-11. CloudPad, an archive tool to document pervasive performances, offers the possibility of displaying multiple hybrid documents of one single event simultaneously, providing several viewpoints of an instance: it can accommodate player experiences, authors' intentions, metadata and other information. What is relevant to this discussion is that it can accommodate not only the authors' view as well as the participants' view, but also the view of other more peripheral agents that may be involved in the event i.e. actors, orchestrators, technicians and passers-by that may interact with the work.

CloudPad uses tagging options to organize the archive. Tags are recognition codes used for marking content so that it can be broken down and accessed according to the tags. Tags provide flexible ways of navigating data, and they can be very beneficial in an archive for pervasive performance. First, they allow dynamic juxtaposition of documents that can bring forth new information about an aspect of the performance: similarities, differences, contrasts, etc. Second, they allow users to navigate the documentation according to their own interests (for example, according to different parameters such as checkpoints, themes, interactions with passers-by, points of view, etc.), rather than having to view this information according to a standard story line or perspective.

5 Further Possible Use and Value

Pervasive performance belongs to a tradition described by Erika Fischer-Lichte (2008) that advocates the transformation from a work of art into an event (Kester 2004; Sauter 2008; Benford and Giannachi 2011). This tradition connects to the discourse of the historical avant-garde, which seeks the democratisation of the arts by empowering people (the player in game studies or cultural agent[7] in performance studies) through encouraging full participation in aesthetic acts and processes, as advocated by American philosopher and progressive pedagogue John Dewey (2005 [1934]). It also aims at fostering co-authorship by understanding artworks as resulting from the meeting between authors/performers and spectators *on equal terms* rather than spectators consuming a work created by authors alone.

In this sense, one could argue that the same way pervasive performance acknowledges the status of the participant as co-creator, it should also let go of its

control of documentation, facilitating the transformation of the participant into 'documentalist'. As understood by Suzanne Briet (2006), 'a documentalist is a subject specialist, who understands the techniques of documentation, respects the physical and intellectual integrity of documents and is capable of *interpreting* and *selecting* the value of the documents in view of their distribution or documentary synthesis' (20, emphasis mine). Even though our participants are not documentalists *per se*, they do share some of the characteristics described by Briet, specially the ability to interpret and select the value of a document, making it explicit through a genuine and personal documentary contribution.

If participants are also to be understood as documentalists, this implies that authors need to cede control over authorship of documentation in terms of performance capture and also in terms of the archive organization and content. Performances can then be documented following an experiential approach, which can accommodate and legitimize all participants' experiences as equally valuable: audience members, performers, orchestrators and authors. All roles can coexist in the archive through "experience" as common denominator.

This has important social and political consequences. It was Jacques Derrida in *Archive fever* (1995) who pointed to the archive as site where 'authority and social order are exercised (…). The archive is a place from which order is given' (1995, p.9) by those with the capacity and opportunity (power) to do so. This means that those who control the archive, control the story that will be disseminated over time. Those who do not contribute to the archive are excluded from deciding what and whose stories "make culture". 'The audience', as Muller has pointed out, "is a kind of silent majority in the historical records of new media art – much talked about but rarely heard from" (2008, 3).

The question here is whether designers and practitioners will invite the audience in or will instead perpetuate their exclusion from the archive. If practitioners decide to encourage audience participation on equal terms, then existing power structures are challenged as everyday individuals are empowered through their participation in the creative process, helping to write a story that will be disseminated into culture and will remain over time. Muller (2008) advocates audience experience as the next step for documentation in interactive fields. However, the documentation is carried out by an external specialist - the documentalist, and not by the participants themselves. But, why should the audience have the designers document their

experiences for them when they can do it themselves? Why have designers' documentation at all if audience documentation is getting so complex and elaborated? I find the answer in German performance scholar Erika Fisher-Lichte's critique of the power of 'role reversals' (meaning the empowerment of a group at the expense of another group's disempowerment). She has argued that role reversal "is positive as long as it establishes a community of co-subjects, but falls short when it merely recreates the old binary relationship in a new guise" (2008, p.40). This means that we need to be careful not to perpetuate unequal power structures instead aiming for a new, more democratic structure. Applied to performance documentation, this means that encouraging audience participation and empowerment should not mean that the designers should be excluded from the documentation process, but that alternative ways for collaborating on the documentation process are generated so that no group imposes a controlling gaze upon the other, and both are empowered through the creative collaboration and co-creation.

Another way participants can be empowered is through display of creativity in the documentation itself, as I have suggested earlier that the documentation in *SFZero* insinuates participants' concern with aesthetic form. The reason for this concern was to gain points from other users subjected to the same documentation standards: creativity and innovation. It is difficult to define the documentation, and whether it mirrors the event, interprets it or even 'invents' a different full story. The resulting stories were grounded in the *Chain Reaction* performance and attempted a reconstruction of the event 'as it happened', something that can be seen in the linear structure that the stories follow and the style "we did this and then we did that". However, none of the stories described unsuccessful missions, even though it is logical to assume that they happened. This can be understood as a tendency towards celebrating gameplay and performance, stressing the positive and hiding the negative, "sweetening" the story to make it more appealing to *SFZero* readers. Jane McGonigal (2006) has argued that players tend to exaggerate or fictionalize their own playing activities to each other and to the media because they want to display a ludic attitude that ensures and maintains the continuation of the game. This means that players turned into documentalists have a double agenda when documenting: gain points to win and motivate others into becoming part of the community. On the one hand, the documentation affords participants becoming documentalists of the event, but on the other hand, it sets requirements around documentation that makes it depart from

mirroring the event "as it was" towards a more celebratory representation. This is not necessarily a bad thing; as a matter of fact, documentation has already been understood as a subjective, creative take on reality in the field of documentary films. Norwegian documentary scholar Bjørn Sørenssen (2001) has argued that the genre of documentary films can not be considered as loyal representations of reality, but can only aspire to "tell us something" about the reality the filmmakers are trying to represent. Perhaps we need to start thinking about experiential documentation in the same creative terms as documentary films and videos, and accept them as fictions of a reality with a transformative power in them. That would mean that fictionalizations of documentation can actually develop and eventually become an art form in itself.

Whether the playing audience will be interested in documentation as part of the ticket is still something to be determined. In our experience with 'Chain Reaction', it was easy to have the audience capture their own performances, but difficult to get them to submit the documentation after the event was over. This became easier when documentation was part of the game mechanics of *SFZero* (and when it was easy to submit). Especially when points were awarded upon submission, the audience members gained something from doing this job.

I tried to implement this two years later in Trondheim, both in the second and third public performance of *Chain Reaction* and also in a similar pervasive performance event named *Random Friends* (Pérez and Španjević 2011). In these two events, I used Facebook as the platform for documentation submission, as a way to facilitate it – since no game or performance community such as *SFZero* was available in the Trondheim area. The rationale I followed was that the use of social media could lower the threshold of participation for documentation in two ways. First, it made it easier to submit as people are used to publishing on Facebook and thus do not need to learn to use a new tool/platform. Second, the exhibitionist factor could be exploited, as people already love to display their activities (and view others) by posting photos on Facebook and other social media sites 'because they are physical traces left in the environment by our everyday actions' (Goslin 2008, 25). As a matter of fact, research suggests that the main reasons people use Facebook are to keep in touch with friends, fulfil social-grooming (activities such as monitoring, gossiping, exhibitionism, voyeurism), minimizing loneliness and finally, to relieve boredom (Wilson, Goslin, and Graham 2012, 209).

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However, I will reserve the experiences from using Facebook for another time, as I have focused here on the learning from using game design strategies to capture and submit documentation. However, I am very aware that integration of social media is to be further investigated. In fact, Jones (2008) has argued that as we are increasingly documenting our experiences through public photo and video sharing sites embedded in social media platforms and as these are becoming part of our everyday lives, documentation is becoming part of culture. People are now becoming "experts" in that kind of documentation, as Briet foresaw. This situation brings us closer to Alain Depocas' vision of a community of documentalists for whom "documentation must not be a mere illustration, but rather an interpretation, *an attitude*" (2002). This urge to document and display life for others to see can be employed in order to use the audience as workforce to document performances. In turn, the audience contributes to the making and preservation of artworks, which leads to empowerment of ordinary people as cultural agents in their own right and an enhancement of democratic culture.

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[1] According to Markus Montola (Montola et al. 2009), 'a pervasive game is a game that has one or more salient features that expand the contractual magic circle of play spatially, temporally, or socially' (12).

[2] The performance project of *Chain Reaction* was developed to answer research questions through performance such as: How can media be used for creative expression? What do media add to the art? The insights I present here are what the group learned from trying to document the performance events.

[3] A playtest is a common design strategy within game design were one orchestrates a game (or parts of it) to test out game mechanics, tasks, sites, etc before making it public and make selections, changes and adjustments according to participants' feedback and creator's observations (Fullerton, Swain, and Hoffman 2004).

[4] A 'platform' is a system that can be programmed and therefore customized by outside users, and in that way, adapted to countless needs and niches that the platform's original developers could not have possibly contemplated (Andreesen 2007).

[5] See http://sf0.org/about/

[6] Bill Nichols has categorized documentary films and video in six modes of representation: poetic, expository, participatory, observational, reflexive and performative. The formation of the different modes is a consequence of the desire to come up with different ways of understanding the world in a changing set of circumstances. In this sense, the modes convey some kind of a 'documentary history' (2001, 99).

[7] Defined as 'an agent that develops recognition of the arts as resources for positive change' in (Sommer 2006).

References

Andreesen, Marc. 2007. "What Is a Platform?" *Programmable Web*. http://blog.programmableweb.com/2007/09/19/what-is-a-platform/.

Batchen, Geoffrey. 1998. "The Art of Archiving." In *Deep Storage: Collecting, Storing, and Archiving in Art*, edited by Ingrid Schaffner, Matthias Winzen, Geoffrey Batchen, and Hubertus Gassner. Michigan: Prester.

Benford, Steve, and Gabriella Giannachi. 2011. *Performing Mixed Reality*. MIT Press.

Briet, Suzanne. 2006. *What Is Documentation? English Translation from the Classic French Text*. Translated by Ronald E Day, Laurent Martinet, and Hermina G.B. Anghelescu. Lanham, MD: SCARECROW.

Bruns, Axel. 2008. *Blogs, Wikipedia, Second Life, and Beyond. From Production to Produsage*. New York: Peter Lang.

Chamberlain, Alan, Duncan Rowland, Jonathan Foster, and Gabriella Giannachi. 2010. "Riders Have Spoken: Replaying and Archiving Pervasive Performances." *Leonardo Transactions* 43 (1): 90–91.

Cunningham, Merce, Paul Kaiser, and Shelley Eshkar. 1998. *Hand-Drawn Spaces*. Performance. http://openendedgroup.com/artworks/hds.html.

Depocas, Alain. 2002. "Digital Preservation: Recording the Recording - the Documentary Strategy". Canada: Daniel Langlois Foundation. http://www.fondation-langlois.org/html/e/page.php?NumPage=152.

Derrida, Jacques. 1995. "Archive Fever: A Freudian Impression." *JSTOR* 25 (2): 9–63.

Dewey, John. 1934. *Art as Experience*. New York: Berkeley Publisher Group.

Firecracker, Beetle Bom, and Spidere. 2009. "Chain Reaction." *SFZero*. http://sf0.org/firecracker/taskDetail/?id=5119.

Fischer-Lichte, Erika. 2008. *The Transformative Power of Performance: A New Aesthetics*. Translated by Saskya Iris Jain. London: Routledge.

Fullerton, Tracy, Christopher Swain, and Steven Hoffman. 2004. *Game Design Workshop: Designing, Prototyping and Playtesting Games*. San Francisco, USA: CMP Books.

Giannachi, Gabriella, Henry Lowood, Glen Worthey, Dominic Price, Duncan Rowland, and Steve Benford. 2012. "Documenting Mixed Reality Performance: The Case of CloudPad." *Digital Creativity*: 1–17.

Giannachi, Gabriella, Duncan Rowland, Steve Bendford, Jonathan Foster, Matt Adams, and Alan Chamberlain. 2010. "Blast Theory's Rider Spoke, Its Documentation and the Making of Its Replay Archive." *Contemporary Theatre Review, Taylor & Francis* 20 (3): 353–67.

Goslin, Samuel D. 2008. *Snoop: What Your Stuff Says about You*. New York: NY: Basic books.

Jones, Caitlin. 2008. "Surveying the State of the Art (of Documentation)". Daniel Langlois Foundation. http://www.fondation-langlois.org/html/e/page.php?NumPage=2125.

Jones, Caitlin, and Lizzie Muller. 2008. "Between Real and Ideal: Documenting Media Art." *Leonardo. Project Muse.* 41 (4): 418–19.

Kester, Grant H. 2004. *Conversation Pieces: Community and Communication in Modern Art*. Berkeley, Calif.: University of California Press.

Kizu-Blair, Ian, Sean Mahan, and Sam Lavigne. 2006. *Journey to the End of the Night*. http://totheendofthenight.com.

Lessig, Lawrence. 2008. *Remix : Making Art and Commerce Thrive in the Hybrid Economy*. New York: Penguin Press.

Løvlie, Anders Sundnes, and Elena Pérez. 2009. "Journey to the End of the Night: San Francisco 2009". Online game platform. *SFZero*. December 1. http://sf0.org/anders/taskDetail/?id=5143.

McGonigal, Jane E. 2006. "This Might Be a Game: Ubiquitous Play and Performance at the Turn of the Twenty-First Century". PhD diss., University of California at Berkeley.

Mohn, Elisabeth. 2006. "Permanent Work on Gazes: Video Ethnography as an Alternative Methodology." In *Video Analysis: Methodology and Methods*. Frankfurt amMain: Peter Lang.

Muller, Lizzie. 2008. "Towards an Oral History of New Media Art." *Daniel Langlois Foundation*. http://www.fondation-langlois.org/pdf/e/towards-an-oral-history.pdf.

Nichols, Bill. 2001. *Introduction to Documentary*. Indiana: Indiana University Press.

Pérez, Elena. 2009. "Chain Reaction | Street Game". Blog. http://chainreactionstreetgame.wordpress.com/.

———. 2011. "Chain Reaction." www.elenaperezrodriguez.com.

———. 2014. "The Impact of Digital Media in Contemporary Theatre and Performance: How Digital Media Challenge Theatrical Conventions in Multimedia Theatre, Telematic and Pervasive Performance". PhD diss., Norwegian University of Science and Technology.

Pérez, Elena, and Bogdan Španjević. 2011. *Random Friends*.
 https://www.facebook.com/randomfriends.trondheim.

Sauter, Wilmar. 2008. *Eventness: A Concept of the Theatrical Event*. 2nd ed.
 Stockholm: STUTS.

Sommer, Doris, ed. 2006. *Cultural Agency in the Americas*. Duke: Duke University
 Press.

Sørenssen, Bjørn. 2001. *Å Fange Virkeligheten*. Oslo: Universitetsforlaget.

The Nottingham Trent University, Steve. 1999. "Digital Performance Archive." 2000.
 http://www.ahds.ac.uk/performingarts/collections/dpa.htm.

Wilson, Robert E, Samuel D Goslin, and Lindsay T Graham. 2012. "A Review of
 Facebook Research in the Social Sciences" 7 (3): 203–20.

Article 4:

'Performance Meets Games: Considering Interaction Strategies in Game Design'

Performance Meets Games: Considering Interaction Strategies in Game Design

Abstract: This contribution offers an evocative conceptual framework to inspire thinking about game design in an alternative way. If Proceduralism focuses on crafting game systems, we advocate recovering the relevance of players' interactions by pulling digitally mediated games out from the screen into the physical world where gameplay and players can intersect and interact. We draw on certain performance strategies to illuminate some currently under-explored game design resources.

With the help of case studies, we propose three possible interaction strategies of what we call *human-to-human interaction* (H2HI). First, having designers improvise according to players' actions real time; second, substituting computer game characters for human actors who perform according to players' suggestions and third, looking outside the traditional computer game environment for a computer-mediated human playground. These cases help us raise some conjectures about the possibilities of recovering the physical and social essence of performance for digital-mediated games.

Keywords: improvisation, performance, game design, human-to-human interaction, experimental performance

1 Introduction

The main current in contemporary Game Studies, derived from earlier Ludological theories (Eskelinen 2004) is called Proceduralism, and focuses on the formal essential properties of games as designed systems with rules, mechanics and challenges. This theoretical frame, embraced both by designers and theorists and led by academics such as Ian Bogost (2007) understands games as *texts*, and analyses them as objects (Sicart 2011).

Although rules are truly the specific core of this medium, proceduralists often forget that the player's input is inseparable from games, that is to say, there is no game without players (Consalvo 2009). While most current games (computer games but also non-digital games) create the gaming experience by focusing intently on the ways in which the game system enacts procedures, there is a transitional body of

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works within the independent scene in which designers conciliate the player with the physical experience of sharing the performative space with peers. Established examples are some of the Die Gute Fabrik game designs, such as *Johann Sebastian Joust* and *B.U.T.T.O.N.* inspired in part by the deliberately awkward and difficult situations Marina Abramović conceived for her audience in some of her early performances, and in which the "notion of content, as a formal property of art objects, is downplayed in order to foreground social context and interpersonal relations" (Wilson 2012, p.58).

We will not advocate any radical stance against proceduralism in games, but rather, we would like to put forward some alternative design approaches as other possible interactive design opportunities. Players and their creative involvement are necessary ingredients in games. However, their engagement and experiences have been taken for granted as game creators focus rather too exclusively on the rules of the game. In the performance field, on the contrary, practitioners have struggled to include the audience in the shows, seducing audiences into artworks through a variety of strategies designed to engage them, breaking down the traditional barrier between performer and artist and trying to establish a shared event of (only) participants in some cases. In this article, we shall look at performative strategies developed by what we generically call "experimental performance" practices in the late twentieth and early twenty-first centuries that may inspire new modes of game design and can help us break from the fixed traditions of mainstream computer-game field. By exploring games as activities rather than only thinking of them as designed artifacts, we shall focus on players' actions, and thus aim at recovering the physicality of the game experience. In this intersection, we hope to contribute to understanding how experimental performance practices can help us to rethink game design. The question to be addressed is:

> *How can we improve the design of contemporary games in a way*
> *that enriches player experience and goes beyond the game system*
> *itself to include the players' capacity to generate new layers of*
> *meaning?*

We will argue throughout this contribution that by substituting certain digital game elements with human improvisation, game designers can exploit the

performative dimension of playing while simultaneously building social experiences around games, as the game becomes a social event.

2 Reclaiming Player Experience from the Game System: Performative Strategies

Game theorist and designer Douglas Wilson has looked into the field of performing arts to propose what he calls *dialogic game design*, a new approach to game design in which the designer and the player relate to each other through the game as if they were "in dialogue"—in a figurative or sometimes literal way. This dialogical design frame was inspired in part by the work of performance artists and the way they relate to the audience, drawing attention to performance practices carried out in the 1960s and 70s by artists like Yoko Ono and Marina Abramović. Examples are *Cut Piece* (1964), in which Ono sat on the stage and the audience was invited to go up on the stage and cut away her clothing, and Abramović's early work *Imponderabilia* (1977), where she and her collaborator Ulay stood nude in a doorway, forcing members of the public to squeeze through and choose whom to face. In these performance art pieces, the artists created a context where the focus was on the artist's relationship with the audience, which became the artwork itself. As performance theorist Erika Fisher-Lichte explains, "performance provides the opportunity to explore the specific function, condition and course of a particular interaction" (2008, p.40). In this sense, these performances can be understood as exploring interactions per se.

From an independent game development stance, as Wilson points out talking about his dialogic designs, many designers "aspire to interact with their players *in person*" (p.75) in the performance art tradition mentioned above. Making the designer physically present seems in some cases to be a successful strategy for changing the relationship between designer and player, making it more dialogical rather than having the designer vanish behind the game system without direct access to the players.

Another keystone of the performance art genre that we would like to bring to game design is the democratic treatment of the audience, in which they are invited to become co-creators. This strategy is indeed a shared premise in the tradition of the avant-garde, which advocates the democratisation of the arts by empowering people through encouraging full participation in aesthetic acts and processes (Dewey, 2005 [1934]). To include audiences in artistic production mechanisms, experimental

performance practices foster co-authorship by understanding artworks as resulting from the meeting between authors/performers and spectators *on equal terms* rather than spectators consuming a work created by authors alone. In the same way that Grant Kester understands artists as "*context* rather than *content providers*" (2004, p.1), we advocate game designers ceding control over their systems to players, by foregrounding collaboration, dialogue and improvised performance.

3 Improvisation and Performance

Improvisation is a strategy from the early twentieth century that proliferated across the arts to foster co-creative practices within the discipline of traditional and alternative theatre. The practice of improvisation advocated a turn towards art forms that were more spontaneous, embodied, playful and collaborative, rather than those that were purely intellectual (Johnstone 2007). Artists experimenting with improvisation produced new disciplines and art forms ranging from improvisational theatre, jazz music, free dance and later, movements such as FLUXUS, Conceptual Art and Happenings.

Frost and Yarrow define improvisation as

the skill of using bodies, space, all human resources to generate a coherent physical expression of an idea, a situation, a character (even, perhaps, a text); to do this spontaneously, in response to the immediate stimuli of one's environment, and to do it à l'improviste*: as though taken by surprise, without preconceptions (2007, p.4).*

In this tradition, improvisation is a skill acquired through training that professional actors use to develop onstage performanc*e—improvisation in and as performance—* such as Keith Johnstone's theatre sports developed during the 1970s in Calgary, Viola Spolin and Paul Sills' audience-led improvisations in Chicago in the 1960s-80s, and Augusto Boal's Legislative Theatre in the 1980s-2000s.

Since the 1960s' *performance turn*, performance art and experimental theatre events have developed parallel to this tradition, but still stand on the shoulders of these improvised genres, sharing improvisation's aim to create transformative events "co-constructed by the bodily presence of both actors and spectators, generated and

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determined by a self-referential and ever-changing feedback loop" (Fischer-Lichte 2008, p.38). What makes performance different from improvisation, among other things, is the following: In performance, the improvisational aspect is left to the encounter between performer and audience, while in improvisation it happens among performers as it develops stage performance. In this sense, performance embraces *contingency* rather than the attempt to stir the audience into controlled and guided responses. In performance, a "shift in focus occur[s] from potentially controlling the system to inducing the specific modes of autopoesis" (p.39). That is, the artist's job lies in creating the conditions for the possibility of interactions to emerge, suggesting rather than explicitly directing participants. This way, the participant is empowered through her performance as she becomes a cultural agent in an aesthetic work. As Denzin argues "performance can be seen as a form of agency, a way of bringing culture and the person in play" (Denzin 2003, p.9).

In this article, we shall use the concept of performance to refer to both professional actors and participants' actions in an aesthetic work in an attempt to see both parties' contributions on equal terms. This stance also captures the essence of improvisation (spontaneity, reaction to stimuli without preconceptions) while adding a level of cultural and political empowerment to the cultural agent.

3.1 Human-to-Human Interaction in Games: Designers and Players

The first case in this analysis is described as when the designer is present within the gameplay and changes the game as it is taking place—in real time, reacting to players' actions. The live action role-playing game (LARP) is the most extreme form of audience-centred improvisation and is considered both theatre and game. In this format, the audience completely replaces the actors, who are used as mere adjuncts and facilitators (Frost & Yarrow 2007, p.60). In some examples, as in the LARP described by Montola et al. (2009) called *Momentum* (Jonsson et al. 2006), the game designers modify the course of the game in real time:

> *The game masters had to work in shifts in order to know player plans*
> *and improvise appropriate and timely responses. They used video and*
> *audio surveillance, spies infiltrating the player group, network*

monitoring, and GPS tracking. Almost a hundred people worked behind
the scenes on the game mastering (p.114).

Something similar happened in the Spanish game-based dramaturgy project called
Mata la Reina (*Kill the Queen)* (Yoctobit 2012). The game space, a 300m2 area, was
filled with microphones and surveillance cameras for game designers and technicians
to follow gameplay from an adjoining room. In addition, game characters (actors)
wearing audio inter-communicators (as we can see in Figure 28), reported issues and
problems to game designers. This method is significantly similar to a process called
The Wizard of OZ, used in testing phases in the field of Human Computer Interaction
(HCI). The Wizard of Oz refers to experiments where a human interacts with a
supposedly autonomous computational system that it is actually being operated by a
hidden human being. For designers, the improvisational flow this strategy affords—
the sense that the activity is moving along steadily and continuously—can be used to
adapt gameplay to the needs of the players, becoming a very powerful tool to balance
the game, react to player performances, and also offer new game options as the game
proceeds.

Figure 28: *Mata la Reina* rehearsal at Intermediae Matadero Madrid, 2012. A droid (dressed in black) admonishes a player off-screen in the picture with the interphone open awaiting orders from the control room. Photography: J.L. Durante.

3.2 Human-to-Human Interaction in Games: Performers, Game Characters and Players

The second case of human-to-human interaction (H2HI) we will examine occurs when the game characters are humans and perform in an improvisational mode according to players' instructions, a strategy that echoes Viola Spolin and Paul Sills's first experiments in the strategy of the *audience request*—in which actors perform what the audience suggests—and Johnstone's theatre sports. *The Ethno-Cyberpunk Trading Post & Curio Shop on the Electronic Frontier* (1994) by Guillermo Gómez Peña and Roberto Sifuentes, a performance that explored cultural clichés and racial prejudices, spectators were encouraged to confess their intercultural fears and desires into microphones within the space (around a third of visitors participated, with the rest remaining as observers) and also via a variety of media offering varying levels of individual security and anonymity. The performers would then improvise—in a highly exaggerated manner—spectators' thoughts and suggestions (Dixon 2007).

This type of real-time improvisation "puts the actors at the service of the audience, placing the control of the story in the hands of the audience, rather than

having it controlled by the authors" (Johnston 2005, p.229). Roles are reconfigured and the performer changes from the *doer* into *receiver*, giving away power and control to spectators, who, through ingenious suggestions and requests, instruct the actors on how to proceed with the performance. This way, new power and status relations are played out, empowering audience over the performers.

Erika Fisher-Lichte warns against the dangers of role reversal and argues that it is positive as long as it establishes a community of co-subjects, but falls short when it merely recreates the old binary relationship in a new guise (p.40). The new audience gets to exert control over the performers, which makes them aware of not only *the power* than comes with this kind of authorship (performers will do anything that is requested), but also *the responsibility* that comes with it (their requests shape the performance and the performers are in the hands of the audience). While this kind of audience request system recreates the performer-audience binary in reverse, it also draws attention to the play of power and the co-creative dynamics of the performance.

A game design that uses the audience request strategy is *Homeward Journeys*—a mix of graphic adventure game and interactive theatre piece developed by the Spanish art collective Yoctobit (2010). The players are asked to help a stressed businesswoman (an actress) get out of the office before time runs out by giving her instructions through a microphone (as shown in Figure 29). Together with her performance, digital scenography—simulating a video game head-up display (HUD) which simultaneously presents several pieces of information, including the main character's health, items, and an indication of game progression—helps the players (audience members) to figure out what the appropriate game inputs are in order to proceed with the game and, along with the actress' reactions, complete it. In this sense, this exchange can be understood as a form of participatory theatre/performance in which players and game characters (performers) achieve game goals in a *joint performative effort*.

Figure 29: *Homeward Journeys* at Intermediae Matadero Madrid, 2011. A woman sitting on the left side of the image holding microphone suggests that the actress look for her mobile phone in the bin while the countdown is running (6.03 min left). Photography: Yoctobit

3.3 Human-to-Human Interaction in Games: Recovering Real World Playgrounds for Players

The third case of human-to-human interaction (H2HI) emerges when the physical playground environment is taken back. Although this is a feature of traditional games, it is also part of a new and emerging genre of local multiplayer party games, which is being developed by digital game designers working outside the conventions of the mainstream computer games industry. Inspired by the hybridisation of digital games and games as a performance platform, these new digitally mediated games explore the durational, embodied, social and extended spatiality of performance forms in which the players interact face to face, such as *Spin the Bottle* by KnapNokGames and *Hit Me* by Kaho Abe. Even though party games can be understood as having evolved from traditional folk games, the social essence present in the original games has been lost in console party games, where the devices have taken attention away from the players. As game designer Lau Korsgaard ponders, on current console party games, everyone directs their attention to the TV. In his view, taking attention away from the people at the party and putting it on a screen always seems to be a "party killer" (Fletcher 2012). In reaction to this issue, designers have begun to discard the screen in

games, instead designing games where physical interaction between players is prioritised over traditional, screen-mediated interactions.

In this sense, theatre games can be a rich inspirational field for game designers, and these types of games connect to a wider tradition of education in theatre where games are used in the studio as ways of establishing strong connections between players. These games create relationships that generate trust, comfort or even fair competition. An example is the adaptation made by Tassos Stevens and Pete Law of an old theatre exercise, the game called *Sangre y Patatas* (Blood and Potato Chips) (2010), where players gather in a playground, blindfolded as shown in Figure 3. In the playground, there are areas covered with potato chips and others with hanging bells as sound hazards. Players must move around the playground, one of them as the killer "Sangre" and the rest are prey "Patatas." As the killer bumps into someone to greet her with her name, the prey must die in a theatrical manner and leave the playground. The winner is the last of the "Patatas" standing. In this way, the game affords theatricality and increased awareness of the other players' actions.

Figure 30: Players try to find each other by listening to the sound cues. Hide and Seek Festival, London, 2010. Screenshot from video filmed by Eva Kanstrup.

As Henry Lowood pointed out in his lecture *Players are Artists, Too* (2010), as designers we are able to "design games [in which] players respond by figuring out how to perform in surprising and delightful ways (...). Players are the experts on using games as performance spaces, creating and showing off their own moves and plays." That is to say, as designers, we should take advantage of the ability of players to use

games as performance platforms, not focusing on perfect play over closed systems but rather on players' creativity and improvisation. In this way, we can think of games as situations and rely more on player's performance.

4 Conclusions

Throughout this article, we have shown three ways of including performance in games. First, having designers improvising to players actions in real time to improve gameplay; second, capitalising on the interactions between players and human game characters—actors who improvise according to players instructions—and third, reclaiming face to face interaction and traditional playgrounds for games.

Including performance in any of the three ways we have described adds a sense of unpredictability and serendipity to the game. In most digital games, even in those with the best computer-mediated systems for supporting emotional behaviour, difficulty level and interactive character behaviour, the game flow is less unpredictable and generative than in the cases presented in this paper, where the unpredictability is human-driven.

Although it is hard to say exactly to what extent, it can safely be said that it is possible to merge performance with the game design field to develop alternative forms of gaming. Through this specific design approach, we aim to set some inspirational strategies for designers to enhance the performative and social essence of games, supplementing current procedural and overly rational positions in game studies and game design.

It can also be argued that the experiences set forth by game designers as the ones described in this paper are attempts to stretch the boundaries of current game and play activities.

For these reasons, we suggest thinking of game design as an activity in which we are going to create human-led experiences. In spite of a sometimes too technocentric culture led by the realm of digital games, we propose a more sceptical stance towards technology in which we can foreground social context and reflect on game design as a whole.

References

Abramović, M., 1977. *Imponderabilia.*

Bogost, I., 2007. *Persuasive games. the expressive power of videogames*, Cambridge, Mass.: The MIT Press.

Consalvo, M., 2009. There is no magic circle. *Games and culture*, 4(4), pp.408–417.

Denzin, N.K., 2003. *Performance ethnography: critical pedagogy and the politics of culture*, Thousand Oaks, Calif.: Sage.

Dewey, J., 2005 [1934]. *Art as experience*, New York: Berkeley Publisher Group.

Dixon, S., 2007. *Digital performance: a history of new media in theater, dance, performance art, and installation*, Cambridge, MA: MIT Press.

Eskelinen, M., 2004. Towards computer game studies. In N. Wardrip-Fruin & P. Harrigan, eds. *First person: new media as story, performance, and game*. Cambridge, Mass.: MIT Press, pp. 35–37.

Fischer-Lichte, E., 2008. *The transformative power of performance: a new aesthetics*, London: Routledge.

Fletcher, J., 2012. How "Spin the Bottle" explores Wii U's social potential. *Interview to Lau Korsgaard*. Available at: http://www.joystiq.com/2012/12/26/how-spin-the-bottle-explores-wii-us-social-potential/ [Accessed March 15, 2013].

Frost, A. & Yarrow, R., 2007. *Improvisation in drama*, Basingstoke: Palgrave MacMillan.

Gómez Peña, G. & Sifuentes, R., 1994. *The Ethno-Cyberpunk Trading Post & Curio-Shop on the Electronic Frontier*.

Johnston, C., 2005. *House of games: making theatre from everyday life*, London: Nick Hern Books.

Johnstone, K., 2007. *Impro: improvisation and the theatre*, London: Methuen Drama.

Jonsson, S. et al., 2006. *Prosopopeia Bardo 2: Momentum*, Available at: http://momentum.sics.se/ [Accessed March 15, 2013].

Kester, G.H., 2004. *Conversation pieces: community and communication in modern art*, Berkeley, Calif.: University of California Press.

Lowood, H., 2010. Players are artists, too. Available at: http://youtube/PVnUDWhCEpE [Accessed March 10, 2013].

Montola, M., Stenros, J. & Waern, A., 2009. *Pervasive games: theory and design*, Burlington, Mass.: Morgan Kaufmann Publishers.

Sicart, M., 2011. Against procedurality. *Game studies: the international journal of computer game research*, 11(3).

Stevens, T. & Law, P., 2010. *Sangre y Patatas*, Available at: http://www.papasangre.com/tag/sangre-y-patatas/ [Accessed March 14, 2013].

Wilson, D., 2012. *Designing for the pleasures of disputation - or - how to make friends by trying to kick them!* Thesis (PhD). Copenhagen: IT University of Copenhagen.

Yoctobit, 2010. *Homeward Journeys*, Available at: www.yoctobit.com [Accessed March 15, 2013].

Yoctobit, 2012. *Mata La Reina*, Available at: www.yoctobit.com [Accessed March 15, 2013].

Yoko, O., 1964. *Cut Piece*.

Article 5:

'Meaningful Connections: Exploring the Uses
of Telematic Technology in Contemporary
Performance'

Meaningful Connections: Exploring the Uses of Telematic Technology in Contemporary Performance

Abstract: This article discusses possible uses of telematic technology in telematic performance. In it, I conduct a comparative analysis of two low-tech telematic performances to identify the artistic strategies at use and what is achieved for creative expression.

On the one hand, the performance *ON LOVE* (2013) by Dutch visual artist Annie Abrahams uses telematics to create visual and dramaturgical juxtapositions. On the other hand, the performance *make-shift* (2010) by British theatre directors Helen Varley Jamieson and Paula Crutchlow uses telematics to engage remote audiences into active participation and collaboration. Through the analysis, we will be able to identify the purpose behind the technology while bringing forward the artistic strategies that are being used and this will help us develop an aesthetics of telematic performance.

1 Introduction

Telematic or networked performance is an art form that applies telecommunication technology to performance. More specifically, telematic performance uses telecommunication networks to establish links between remote spaces, and presents the activities in those separate spaces at a single performative event. As a genre, it traces back to the 1980s when video conferencing enabled remote visual connection, allowing artists like Nam June Paik (1984) to "begin to (telematically) talk, simply to (telematically) talk" (quoted in Dixon 2007, 420).

Today, there are typically two versions of telematic performance. One is high-tech; it uses teleconferencing to connect full-body performers in two or three dimensions, has high resolution, and is expensive and cumbersome; so technically complex that it needs to be mounted in a fixed location. The other version applies low-tech, domestic technologies such as Skype, has low-resolution, is cheap and pervasive; technically so simple that it can be used anywhere (Geelhoed 2013).

Since its early beginnings, high-tech telematic performance has taken place almost exclusively within university networks, since it could only be carried out thanks to the collaboration between scientists and artists (and sometimes supported by private industry) in networks with abundant funds and technical resources. This type of collaboration has become a widespread and celebrated practice within the scientific community, since the disciplines involved help each other fulfil their own agendas while simultaneously contributing to academic inquiry (Faver 2001; Sheppard et al. 2008). That is, scientists use performance to further develop technologies, planting their technologies in social aspects of human activity while also researching ways of commodifying these technologies. Artists, on the other hand, use technology as a means of experimenting with innovative machinery to pioneer the development and modernisation of the performance field.

This apparently beneficial collaboration has resulted in two problems. First, due to its high-tech nature, high-tech telematic performance remains a rarity in regular theatre touring circles, since such groups usually cannot provide the appropriate technological means or adequate broadband for transmission.[3] As a consequence, high-tech works remain as laboratory experiments of scientific departments in research institutions, are used mainly as academic proof, and become part of a large 'network of citations' that legitimates the genre within the scientific community while producing research insight (McGonigal 2006). In this sense, high-tech telematic performance emulates the future of performance, helping to define and advance the field, but as they are too high-tech to be performed in regular theatre circles, such performances work more like a vision of what performance can be rather than an accurate representation of the state of the art.

The second problem rests in the fact that high-tech telematic performance has been criticised for working only as technological demonstrations with no aesthetic value in themselves (Berghaus 2005; Dixon 2007), since they use what I have elsewhere called a *Shock and Awe Aesthetic* that seeks to impress audiences only with technological display while dismissing the aesthetics of the works (Pérez 2014).

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[3]   In conversation with telematic dance practitioner and theorist Ivani Santana (2013) under the frame of the Remote Encounters conference held in Cardiff, 11-12 April 2013, she explains how in her experience, the reason for high-tech telematic performance not to be shown in regular theatre and dance venues is not because of the technology *per se* but because of the broadband that cannot sustain such heavy data flows.

Performance and game scholar Jane McGonigal warns about the risks of the convergence of art and technology and argues that "projects that seek to advance technologies further risk undermining the aesthetic for the sake of the technical, and create works that are technically advanced but offer little interest as cultural products" (2006, 140). It then becomes important to ask where exactly is the value of these works located and what role is technology playing in this genre.

In recent years, there has been a proliferation of telematic projects within art circles, as video conferencing has been made available to artists and the everyday, ordinary person. These projects are low-tech versions that provide crucial information on the real, as opposed to the 'envisioned', aesthetic qualities and possibilities of this genre.

In this article, I propose looking at making a comparative analysis of two low-tech pieces: *ON LOVE* (2013), by Dutch visual artist Annie Abrahams, which uses telematics to create visual and dramaturgical juxtapositions, and *make-shift* (2010), by British theatre directors Helen Varley Jamieson and Paula Crutchlow, which uses telematics to engage audiences into active participation and collaboration. Each piece represents a body of works currently taking place in theatre and performance venues.

I shall argue through my analysis that the artistic value of these performances rests in the ways in which they give technology a role, using it with a clear purpose, or artistic intention, other than mere technological display of telematic connection. We will also identify the artistic strategies used and what is achieved through the work.

2 The Performances: *ON LOVE* and *make-shift*

From their homes, in front of their web cameras, nine English-speaking performers communicate on the issue of love. The performance, *ON LOVE*, follows previous works in the frame of the Angry Women research series started in 2011 where performers communicated and collaborated using anger as a theme, and where anger was displayed onscreen using the web cameras as facilitators. *ON LOVE* changes the subject but also aims at displaying the performers' understanding of love in an environment where performers are physically alone, but digitally together (Abrahams 2013).

The performers are united in a webcam grid visible on their screens and projected as one single video in one main performance space. This performance space

is responsible for controlling the shared sound and image, as it is the only space with a sitting audience, who watch the video projection as if in a movie theatre. The audience members' role is to watch and mentally process and decipher the conversations.

The performers execute a protocol or script together. Sometimes, this is expressed as a simple rule or sometimes a few pages of text, but there are always open instructions that need to be negotiated by the performers during the performance. There are certain rules that regulate this communication while simultaneously adapting it to the performance setting, which are the following:

- The performers are connected, using a webcam, to a shared interface where they can see images and hear the sounds from all the other performers;
- Because of network delay and the way the interface has been constructed, no two performers receive the same images and sound at the same time;
- To avoid difficulties while speaking due to digital delay, performers must wear a headset to avoid hearing their own voices, and cannot judge their participation in the total sound environment (Abrahams 2011).

make-shift is a long-running series of networked performances located in peoples' homes. It is an event that takes place telematically between two ordinary houses (normally in different countries) and an online performance space accessible to anyone with a broadband connection. The dramaturges Helen Varley Jamieson and Paula Crutchlow are each located in one house, and are in charge of working with the participants (from eight to twelve people in each house) while they also manipulate the online event where there are online participants. The artistic intention is to create a performance where participants experience an intimate live performance event while they also take part in a conversation about social issues.

Jamieson and Crutchlow explain the piece in their website as follows:

The work has an important ecological theme, which is raised and discussed through both form and content in a light but meaningful way. Participants are asked to bring all the plastic they have used in the previous 24 hours to

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the event where they are invited to join in some easy games and tasks. Paula and Helen (one in each house) guide the evening through elements of personal stories and experiences, webcam choreography, avatar puppetry and audience interaction with participants co-authoring the work as it progresses. Everything that happens in the houses is streamed to online audiences who can also join in the activities and contribute text chat visible on the interface to everyone participating. The event ends with a sharing of food in the houses and a discussion around the consequences of global connectivity and consumption (Jamieson and Crutchlow 2010).

3 Similarities: Connecting Private Homes with Low-Tech.

These two performances have the following things in common: First, they use low-tech, domestic telecommunication technologies modified to serve their artistic practices[4]. Annie Abrahams uses an interface named mosaika.tv, a platform similar to a telematic tv-set. Developed and adapted by Ivan Chabanaud, the interface allows more than one stream and is able to project them all together in one image, as shown in Figure 31.

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[4] These are tailor-made technologies that started as low-tech, but developed into quite sophisticated and complex ones as they got funded. In this article, I am using them as an example of low-tech because of their origins in artist studios with little resources, but their development into high-tech needs to be acknowledged. This shows that the line between low-tech and high-tech is blurry and difficult to define.

Figure 31: Tony Chapman (UK), Pascale Barret (BE), Denise Hardman (UK), Antye Greie (FI), Martina Ruhsam (SI), Annie Abrahams (WL), Ben Robinson (UK), Hedva Eltanani (UK) and Derek Piotr (USA). Interface grid of the performance ON LOVE. Photography by Ienke Kastelein,

Helen Varley Jamieson and Paula Crutchlow use what they have called the Live Stage link, a purpose-built online interface that contains two elements within a single web page: audio-visual streams, and UpStage, an online performance platform with avatars, audio and a text chat, as shown in Figure 32.

Figure 32: The audio-visual streams on the left (one for each house) show what happens in the private homes. The rest of the screen shows UpStage, where the virtual avatars interact and communicate the main narrative. The text chat (part of the UpStage) is where performers communicate with each other and with the online participants.

UpStage was initially developed in 2004 in New Zealand, and continues to be maintained by a global community of volunteer open source developers and artists that follow the ideology of Free/Libre Open Source Software (FLOSS). The Live Stage interface connects with the philosophy of open source movements where code is publicly shared and open for modification. Mosaika.tv is not open source *per se*, but is made available by the developer to anyone who wants to re- use it, free of charge.

The second aspect these interfaces have in common is how both performances connect private homes. *ON LOVE* connects nine performers, each sitting in front of their computers in their private spaces, and composes a shared image that is rendered onto a public space; a theatre stage, gallery or museum. The private spaces of the performers are, this way, displayed as an art. *make-shift* connects two private homes, each with its own informal stage as shown in Figure 33, and online platforms to which online visitors connect. In total, there are three spaces with both performers and spectators: home number one (Jamieson and participants), home number two (Crutchlow and participants), and the online interface (virtual avatars of Jamieson, Crutchlow and Dave, a middle-aged corporate man with a robotic voice and strange sense of humour, together with the online visitors).

Figure 33: A moment at the beginning of the performance **make-shift** in a private home. The interface is projected onto one of the walls for the audience to see. Photography by Andrea Ass.

The third aspect the two interfaces have in common is how telematic communication is not only used as a vehicle to carry out the performance with but is also a topic explored in the performance, in a meta-reflective level. This means that both performances invite for reflection on the nature of telematic technology *per se* (possibilities and limitations), in addition to the main conducting theme. In Abrahams' case, the main theme is love. In Jamieson and Crutchlow's performance, the main theme is ecological consumption.

4 Differences: Disciplinary and Cultural Traditions

In disciplinary terms, each performance piece belongs to a different tradition (or trajectory), even though we find them 'in the same room': the theatre stage.

Shannon Jackson explains how, in the contemporary art fields, the visual arts, theatre and performance often find themselves in the same room under the umbrella of "contemporary experimental performance" (2011, 2). This is so because, on the one hand, visual artists "have begun to refuse the static object conventions of visual art" and turned towards the performative in an attempt of "exploring the durational, embodied, social and extended spatiality of theatrical forms" (*ibid*). On the other hand, theatre practitioners have also refused "the temporal conventions of dramatic theatre, approaching the static, all-at-once, juxtapositive conditions that art philosophers from Lessing to Reynolds have associated with painting" (*ibid*). According to Jackson, it is crucial to identify the tradition to which the performance work belongs and the new tradition that it is embracing in order to better understand

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the conventions being challenged as well as the innovation for which the performance is aiming (*ibid*).

Jackson's appreciation is helpful to our analysis since it helps us understand the different genealogies of the works being compared that find themselves united under the umbrella of technology. Annie Abrahams is a visual artist exploring the embodied possibilities of the theatrical medium. In contrast, Jamieson and Crutchlow are theatre practitioners moving towards new media art forms.

The second difference between these two works is the cultural tradition to which they belong. Abrahams's work belongs to a tradition that considers the work of art as an independent and autonomous entity created by a specialist, an artist, and which contains within itself a message or abstract idea. The artwork is understood as an object that the creator passes onto a receiver, who then consumes and deciphers it.

Jamieson and Crutchlow's practice belongs to the opposing cultural tradition that considers the work of art as a collaboration between authors and spectators, and treats the audience in democratic terms, inviting its members to co-create artworks. This strategy is indeed a shared premise within the tradition of the avant-garde, which advocates the democratisation of the arts by empowering people through encouraging full participation in aesthetic acts and processes (Dewey 2005). To include audiences in the mechanisms of artistic production experimental performance practices foster co-authorship by understanding artworks as resulting from the meeting between authors/performers and spectators *on equal terms* rather than spectators consuming a work created exclusively by the authors.

ON LOVE and *make-shift* belong to different artistic disciplines that cohabit under the umbrella of performance and technology. As they contribute to two opposing cultural traditions, the two performances analysed together provide crucial information on the state of affairs of the performance arena today.

5 Performance Strategies and the Role of Technology

ON LOVE and *make-shift* use telematic technology in performance in very different ways and for different purposes. What are the strategies used? And more importantly, what does telematic technology afford?

ON LOVE uses telematic technology to juxtapose images and conversations to tackle the issue of love. The piece starts with a view of the performers' backs, who,

one by one, turn towards the web camera (towards the audience) to start his or her performance on love. Each performer talks to the camera, an action by which each one is simultaneously addressing the other performers and the audience, a gesture that puzzles the spectator. To the audience, it is unclear whether the performers are talking to each other, to the audience or to themselves, or a bit of all three, as there are signs that point in each direction. It is also unclear whether the performers are following a script or following personal impulses and opinions. In this sense, the boundaries between a real conversation and a theatrical one are blurred, as is often the case in performance practices.

The layout of the interface projected on stage is a large square divided into nine smaller squares juxtaposed to each other. In each square, we see the face and a bit of the upper body of the performers (what one normally sees in videoconferences), as well as a backdrop of the room where they are sitting. The lighting is different in each square, revealing that the performers are located in different time zones, and the furniture reveals a few performers' private homes in the background.

The juxtaposition between the images of the background put against each other make explicit the performers' differences while the conversation aims at bridging those very differences into a unitary performance.

Dixon argues, from a theatre and performance perspective, that mere juxtaposition does not qualify for telematic performance to be satisfactory (2007, 427). He claims that "telematic works too commonly suspect that the simple presence of these remote, virtual bodies is considered to be enough, since the magic of technology is there for all to see" (*ibid*). In his view, the juxtapositions need to be meaningful rather than separated and arbitrary (*ibid*, 428).

In this sense, he is criticising 'postdramatic theatre' practices that merely juxtapose technology with postmodern text, using "not having to make sense" (*ibid*, 401) as an alibi for creating works that lack dramaturgical elaboration as they embrace "the meaningfulness of meaninglessness" as their aesthetic value (*ibid*). Postdramatic theatre is Hans-Thies Lehmann's roomy term to describe theatre and performance practices that deconstruct canonical texts, substitute characters with images and figures, and in general, follow principles other than those of the Aristotelian drama (Lehmann 2006).

In their recent book, *Multimedia Performance* (2012), Rosemary Klich and Edward Sheer argue that these type of performances are part of the tradition of the

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"theatre of images" (65) and follow the post-dramatic theatre paradigm because they seek to create visual works that prioritise visual narratives over textual dramaturgy. In their view, these works do not lack dramaturgical elaboration, they just follow principles of visual composition rather than dramaturgical ones to create and communicate meaning (*ibid*).

The juxtaposition that Abrahams uses in *ON LOVE* is not juxtaposition for juxtaposition's sake, rather, it has a purpose: revealing each performer's real and private takes on love. The spectator moves across squares, looking for differences and similitudes between performers and their locations, while listening to their different takes on love, which may be fictional or not. In this sense, the visual juxtapositions (the squares), the dramaturgical juxtapositions (the words) and the performative juxtapositions (the performers' attitudes and actions) work together to simultaneously convey and blur a clear message on love.

make-shift uses telematic technology to foster collaboration and discussion between three different audience groups and, in this way, tackles the issue of consumption. The work uses improvisational strategies that invite participants to carry out actions that contribute to the making and development of the performance.

For example, the on-site audience is asked to write on small pieces of paper the name of something non-biodegradable that they'd recently disposed of. Those words are then fed into the interface by Jamieson and Crutchlow, the UpStage, which starts showing a narrative based on those words.[5] Another technique to invite participants into the work includes giving them different instrumental tasks in the performance, such as filming certain part of the performance, holding machinery or even typing text into the interface.

The on-line audience members are asked the same questions as the on-site audience, but in addition, they are also given a quiz by Dave (a virtual avatar) that is more elaborated than the questions asked to the on-site audience. This is because, as the online visitors cannot participate physically in the event by performing the instrumental tasks, the degree of elaboration and complexity of the material typed into the text box needs to be larger. This way both audiences, on-site and on-line, are given tasks that fit the medium where they are located; the on-site performance

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[5]   This improvisation technique echoes the audience-request system created by Viola Spolin and Paul Sills in Chicago in the 1960s-80s, a common technique used in any improv show today.

explores the physical and visual interaction, while the on-line performance focuses more on visual interaction and textual communication.

The improvisation strategies allow the organisers to address the three audience's sensibilities, aiming at treating the three groups on equal terms rather than prioritising one over the rest. The variety of tasks that the audience members are asked to do has the consequence that audience members go through several roles during the same event; spectator, performer, builder, video-producer, learner and team-player. This way, *make-shift* gives audience members a sense of empowerment as they contribute to the performance as a whole.

The performance space is thus expanded, as it includes audiences located in remote spaces. Dixon argues that for space to expand in interesting ways, the activities taking place in the different spaces need to have aesthetic value in all the spaces, or at least in all the spaces where there are spectators (2007, 413). Following Dixon's line of thought, I have argued elsewhere that space is expanded not only by 'having' spectators remotely located, but also by having them carry out actions that have an impact in the performance itself (Pérez 2014). *make-shift* exemplifies this observation by giving tasks to all the participants, on-site and on-line, and in this way, goes beyond mere connection into meaningful collaboration.

5.2 What Is the Artistic Purpose?

'Alone together' is an idea coined by psychologist Sherry Turkle (2011), which refers to the ways in which new communication technology affects human relations in a time when technology has pervaded all aspects of human activity. She argues that, on the one hand, technology allows us to feel connected and get a sense of companionship when we are physically alone, but on the other hand, it keeps us constantly connected even when we are physically together, distracting us from actual physical interactions (*ibid*). Alone togetherness is thus a situation that contains both elements of possibilities and limitations.

The two performances analysed in this article reflect Turkle´s ideas on the possibilities and frustrations brought by technology.

ON LOVE creates a sense of intimate communication afforded by the use of web cameras, which are placed in the performers' own private spaces, in their home offices, bedrooms or studios. This set-up of apparent intimacy affords performers to

talk about private, important matters, and Abrahams uses this intimacy to discuss issues such as love (and anger), big concepts that are difficult to tackle and normally need appropriate conditions to be approached. *ON LOVE* creates an intimate space where it is safe to be honest.

The interface gathers all the 'confessions' on love and projects them simultaneously onto a large surface that resembles a typical surveillance screen; where multiple locations are shown to facilitate surveillance by a security officer who watches what happens in those spaces. In this sense, the interface and its projection on the theatre stage can be understood as a betrayal of the intimacy afforded by the web cameras, as the communication that seemed private and intimate becomes suddenly public.

On the one hand, the web cameras create a sense of intimacy and safety that affords performers reflecting on difficult and abstract issues in a nuanced, honest way. But, on the other hand, the interface betrays this intimacy as it projects the confessions for all to see. What we learn is that telecommunication technology can provide a sense of privacy that is not real because it can be easily manipulated and become public. The sense of privacy is only apparently so, since it is ultimately not really private.

make-shift also informs us about Turkle´s ideas in the following way. The three audience groups are physically separated from each other, yet they collaborate through the online interface. The telematic connection allows one group of people gathered in the privacy of a home to connect to a larger community of people to discuss social issues and work around them to figure out alternative ways of dealing with the problems. The performance aims at raising social awareness around consumption, and also shows participants that it is possible to reach out to a wider audience and collaborate with them in a meaningful way, even though they are remotely located. In this sense, the use of telematic technology allows global connection, affording collective social action about issues that matter, providing a sense of possibility.

But the performance also problematises the use of telematic technology by displaying onstage the heavy orchestration that is required to put on the event; the effort necessary only to be able to connect with the other group to then collaborate. The orchestrators, Jamieson and Crutchlow, are in charge of a thousand little operations, and constantly ask for help from participants to be able to complete all the

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actions necessary not to lose contact with the other groups. The vast amount of work necessary to make meaningful collaboration happen is brought forward in this performance, as it shows the dedication that is required and the milimetrical reciprocity with the other audience groups to reach meaningful collaboration.

On the one hand, telematic technology affords reaching out to remote audiences, and collaborating with them for social change, but the technical difficulties that arise may stop the process all together. In other words, 'telematic' used in this way may still be a dream more than a reality.

6 Conclusion

The starting point for my analysis has been that in telematic performance, technology needs to be given a role and be used with a clear purpose other than mere technological display. This means that telematic technology should be used not only to connect remote spaces and to a limit itself to displaying the connection in a theatrical manner, but it should also use the connection in order to do 'something else' with it.

The analysis of the two low-tech telematic performance pieces suggests the following about telematic performance as genre.

The artists' intention with *make-shift's* telematic connection is to allow collaboration between remote groups of participants to have a conversation about ecological issues and then come up with alternative ways of dealing with consumption. The contributions to the conversation come from on-line visitors as well as from on-site participants, who, together, fill with content a piece where organisers have constructed a hybrid dramaturgical frame that is partly theatrical, partly technological.

ON LOVE uses telematic technology to connect remote performers for an intimate and honest conversation on love. The purpose of the connection is to display each performer's individuality while simultaneously being part a group in the performance. This is achieved by the use of visual, dramaturgical and performative juxtaposition strategies, which affords the creation of layers of meaning.

Both performances bring forward telematic communication as a theme, including its possibilities and its discontents. On the one hand, telematic communication presents the creative possibilities that it affords at the service of

performance, collaboration and discussion, but it also shows the problems it generates; the technical obstacles that need to be overcome to be able to connect and the confusion around technology's private/public nature.

ON LOVE shows how interesting and also problematic it is to try to have a conversation with this technology, while *make-shift* gives us a taste of the possibilities of the genre for meaningful collaboration and yet it also shows how hard it actually is to make happen. We learn of all the technological configuration and its complexity in setting up what we have to go through in order to connect to each other in a meaningful way. In this sense, our everyday routines are displayed in front of us, making explicit how much dedication technology, which was supposed to make our lives easier, actually requires.

References

Abrahams, Annie. 2011. "Trapped to reveal - on webcam mediated communication and collaboration." *Journal for Artistic Research* (3). Accessed February 20, 2014.

Abrahams, Annie. 2013. "ON LOVE." Accessed February 20, 2014. http://www.bram.org/onLove/index.html.

Berghaus, Günter. 2005. *Avant-Garde Performance: Live Events and Electronic Technologies*. Basingstoke: Palgrave MacMillan.

Dewey, John. 2005. *Art as experience*. New York: Berkeley Publisher Group.

Dixon, Steve. 2007. *Digital performance: a history of new media in theater, dance, performance art, and installation*. Cambridge, MA: MIT Press.

Faver, Cheryl. 2001. "Toward a digital stage architecture: a long-term research agenda in digitally enabled theater." Accessed February 20, 2014. http://www.gertstein.org/index.html.

Geelhoed, Erik. 2013. "User requirements in immersive mediated performance spaces" paper presented at the Remote Encounters Conference, April 12, Cardiff.

Jackson, Shannon. 2011. *Social works: performing art, supporting publics*. New York: Routledge.

Jamieson, Helen Varley, and Paula Crutchlow. 2010. "make-shift." Accessed February 20, 2014. http://make-shift.net/.

Klich, Rosemary, and Edward Scheer. 2012. *Multimedia performance*. Basingstoke: Palgrave MacMillan.

Lehmann, Hans-Thies. 2006. *Postdramatic theatre*. London: Routledge.

McGonigal, Jane E. 2006. "This might be a game: ubiquitous play and performance at the turn of the twenty-first century." PhD diss., Berkeley: University of California.

Pérez, Elena. 2014. "The impact of digital media in contemporary performance: how digital media challenge conventions in multimedia theatre, telematic and pervasive performance." PhD diss.,Trondheim: Norwegian University of Science and Technology.

Santana, Ivani. 2013. "Dramaturgy of a networked dance performance: a new temporality" paper presented at the Remote Encounters Conference, April 11, Cardiff.

Sheppard, Renata M., Mahsa Kamali, Raoul Rivas, Morihiko Tamai, Wanmin Wu, and Klara Nahrstedt. 2008. "Advancing interactive collaborative mediums through tele-immersive dance (TED): a symbiotic creativity and design environment for art and computer science." *ACM Library*. Accessed February 20, 2014. doi:10.1145/1459359.1459437

Turkle, Sherry. 2011. *Alone together*. New York: Basic Books.

Article 6:

'The Expansion of Theatrical Space and the Role of the Spectator'

The Expansion of Theatrical Space and the Role of the Spectator.

Abstract: In this article I discuss how the expansion of space through the application of media to performance impacts the role of the audience. First, I demonstrate the need for a more nuanced understanding of what the expansion of theatrical space means, as well as the political and aesthetic impulses behind the expansion of theatrical space and its discourse.

I then analyse several cases across multimedia theatre, telematic and pervasive performance, to show how space expansion serves both traditional and radically new conceptions of audience, going from a "spectator-as-viewer" in multimedia theatre, a distributed "online spectator" in telematic performance, and a mobile "spectator-as-player" in pervasive performance.

Keywords: Keywords: digital performance, multimedia, participation, pervasive performance, space expansion, spectator, telematics.

Introduction

This article investigates performance works at the convergence of *digital media* and *contemporary performance*, and the ways in which they expand theatrical space. Digital media refers here to digitized (as opposed to analogue) content such as text, audio, video, graphics, metadata, etc. that can be stored and transmitted over the Internet and computer networks. Contemporary performance refers to performance works that combine different artistic traditions in one performance event – such as experimental theatre and dance, video art, visual art, music composition and performance art – and which also engage with social and political realities. The convergence of digital media with contemporary performance has produced a significant body of *digital performance practices*[1] that are said to challenge and reconfigure conventional theatrical notions of space, time, body/physicality, audience-performer relationship and interactivity, as well as the technologies themselves, through their applications to artistic productions. This article shall investigate how and to what ends technological artefacts have challenged and reconfigured performance space, and suggests that the expansion of space relates to the increase of agency of the spectator.

To mark the heterogeneity and dynamism of this arena today, I suggest three distinct categories of digital performance where space expansion has been an issue. The first category, multimedia theatre, refers to "any performance that employs film, video or computer-generated imagery alongside live performance".[2] Here, it also refers to performances with a traditional relationship between performer-spectator, where the audience watches a staged performance without actively taking part in it as performers. The second category, telematic performance, includes performances that connect remote actors and performance spaces through networked communication technologies. And the final category, pervasive performance, includes mixed media events that combine gameplay with performance and is used as a platform for potential collaborative art making in public spaces. These are events with a playing audience where, thanks to mobile media, the action moves from the self-contained internal space of the theatre venue out into the everyday environments of its users.

As we see, this landscape of digital performance is vast and varied. The conventional theatre space has been said to "expand" in each of these forms, but the concept is used, as I will argue, in a loose and general way. For example, in multimedia theatre, space is expanded metaphorically; in telematic performance it is expanded psychologically, whereas in pervasive performance, it is expanded in a literal, territorial sense.

This lack of clarity as to when space is claimed as being expanded needs to be addressed. As I proceed to clarify how exactly space is expanded in these three categories, I hope to, simultaneously, be able to examine how the role of the spectator changes as a result of this expansion. In this sense, I aim to gain a better understanding of a question central to theatre and performance studies; as Christopher Balme puts it, "the close relationship between stage forms and spectatorial attitudes".[3]

The expansion of theatrical space and spectatorship

Theatrical space refers to the spatial structure that regulates the relationship between actors and spectators.[4] The concept implies a building, or a fixed area, where participants are located. Inside the theatre building, this space can be organized in various ways that structure the encounter between actors and spectators, going from strict forms that demarcate and divide the space for spectators, to more flexible forms where spectators can move freely and choose their point of view.[5] Multimedia theatre can adopt any of these structural forms by adding technology in the demarcated stage

areas. The expansion of theatrical space here refers to the ways in which new spaces can be incorporated into the existing theatrical space through technology. Steve Dixon has argued that additional spaces can be created though projections, for instance, even though these are two-dimensional.[6]

Other theatre forms do not depend on fixed architectural structures and take place outside of the theatre building and institution. Marvin Carlson has called these expanded spaces "ludic spaces", a "permanent or temporary ground for the encounter of spectators and performers".[7] However, theatrical spaces are also ludic spaces, as they are spaces where play takes place. In this article, I will refer to spaces outside of enclosed theatre venues as "expanded" theatrical spaces. For example, telematic and pervasive performance connect and take place in various spaces, both theatrical (inside a theatre house) and expanded (public spaces or private homes), thanks to the application of networked technology and ubiquitous media.

In this situation of proliferation of spaces for performance – theatrical and expanded, it is becoming increasingly difficult to locate the artwork, as it is not unified in one location, but it is dispersed and distributed across expanded spaces. Christopher Balme has proposed the concept of "distributed aesthetics" to describe the composition of these type of performances.[8] He aims to open up the concepts of theatrical and expanded space to incorporate virtual environments, and proposes the broad concept of the "theatrical public sphere" to be able to encompass the variety theatre spaces, which consist in a combination of physical spaces (theatrical and expanded) with media sites (going from Internet sites, to films and TV) across the mediasphere. Balme's concept is useful as it points to how widespread and scattered – but yet connected – the spaces for performance can be in the media age. However his attempt of opening up ends up opening too much, so to speak, as it becomes impossible to trace a performance that deludes in space and time in the all too broad concept of the public sphere. In the works that I will be analysing in this article the distributed spaces for performance do not disperse as much as Balme thinks they could, as these performances are always still connected to a physical event and depend on it. The concept of distributed aesthetics is productive, though, because it breaks the idea of a central, unified space into smaller and scattered, distributed spaces, and brings in the possibility of being together while still being apart.[9] In other words, there can still be a relationship between performers and spectators without the need to share one and the same space.

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Steve Dixon has proposed using the figure of the spectator as criterion for establishing theatrical and expanded spaces. He has argued that "networked technologies certainly link and connect different places enabling remote communication, image and sound transfer, and so on, but the physical location of the participant remains the overriding spatial position of both the artwork and the viewing subject".[10] In his view, the criterion to locate the artwork is the physical location of the spectator, rather than, for example, the physical location of the performer, a criterion presented by Scott DeLahunta earlier.[11] This appreciation is crucial, as it links the expansion of space to the figure of the spectator, delimiting it to spaces that can "contain" spectators, or where spectators are "present". However, even though Dixon raises the status of the spectator as central in the theatre event, he does not problematize it or delve into the specifics of the role.

When talking about telematic performance and how a sense of presence is conveyed in remote environments,[12] media scholar Katherine Hayles has argued that presence is no longer determined by the physical location of bodies, but rather by the actions that bodies are able to perform in responsive environments.[13] Hayles' understanding refers to remote dancers (professional performers) dancing together in a screen interface system, rather than to spectators. However, Hayles' concept can be transferred to the context of the audience, as it helps to expand Dixon's role of the spectator, from a participant "located" in an environment, to a participant that "acts" in an environment that "supports" those actions. Support here means that the environment is able to accommodate the actions and respond to them in an interactive way; the criterion to define the performance space is thus not where the spectator is physically located, but in the expanded environments that afford spectators' actions.

Understanding expanded theatrical spaces as the spaces where participants are able to perform actions is assumed in the work of Steve Benford and Gabriella Giannachi with Mixed Reality performance (or MR, corresponding to what I am calling pervasive performance).[14] MR generates hybrid realities that span physical environments and virtual worlds. In their view, it is participants who, by their actions (a sum of actions would be what they call "trajectories") [15] generate this hybrid space as they advance in the performance. They also point to the need for collaboration and negotiation between participants located in physical environments and participants located in the virtual worlds to be able to progress in the performance.[16] In this sense,

space expansion also has to do with collaboration between the participants located in the different expanded spaces.

So, when we talk about the expansion of theatrical space, we see that the limits around the concept of spectatorship are brought forward. What is the role of the spectator if we compare the more traditional spectatorship in multimedia theatre of "spectator as viewer" and the expanded theatrical spaces of telematic and pervasive performance that afford a more active role of "spectator as agent"? How do the different expansions of space re-configure spectatorship?

2 Multimedia theatre: The spectator as viewer

Multimedia theatre generally refers to any performance that employs film, video or computer-generated imagery alongside live performance. In this article, I am using the term '*multimedia theatre*' as a way to mark the traditional relationship between performer-spectator, where the audience watches a staged performance without actively taking part in it as performers. Within this category, I include performances that follow conventional dramatic forms where a message is conveyed and communicated to an audience in an Aristotelian fashion, as well as *postdramatic practices*[17] where the focus is in simultaneous dramaturgy, appealing to the unconscious by generating gestures, scenes and emotions, rather than aiming at communicating a clear and fixed message.[18]

Steve Dixon has argued that the use of digital media onstage - screens and projections - enables practitioners to "frame additional spaces in two dimensions (even when the computer images on them are rendered as three-dimensional simulations)".[19] In his view, "despite the flatness of the screen frame, projected media can in one important sense offer far more spatial possibilities than three-dimensional theatre space".[20] The additional space that Dixon refers to is the *in between* space that is created when projected image and stage action are combined, which affords new meanings. I want to make a crucial point here, which is how this is not a topological space in itself as much as it is a set of strategies. What makes us think of the relationship between technology and traditional theatre elements as mainly spatial is the importance of their arrangement in terms of composition on a stage, and how the space left in between them seems to be filled by meaning. This is easily perceived when images are projected as background, either occupying the whole area or parts of it, while stage action is simultaneously located in front, as seen in Figure 34; or when

the projections are located before the stage action, involving the actors, as shown in Figure 35. In this way, those imperceptible relationships are made explicit and brought forward to the eye of the spectator, and the metaphor of space is especially apt to illustrate the site where perception and meaning creation takes place. So when Dixon claims there is an expansion of space thanks to use of media onstage, what he is really saying is that there is an expansion of new strategies for meaning making thanks to the combination of media and stage action. In this sense, it is key to note that in multimedia theatre, there is not a literal expansion of space, but rather, a metaphorical one.

Figure 34: A moment during the performance *The Andersen Project* (2006) by Canadian Robert Lepage. The computer interface that the stage actor is using is projected as background, allowing the audience to see the details of the screen. Photography by Emmanuel Valette.

Figure 35: A moment during the performance *Ghost Road* (2013) by Fabrice Murgia of Belgium. The image of a dancing ballerina is projected on a transparent screen located between the audience and the stage actor. Photography by Kurt Van Der Elst.

The consequences of this type of expansion for the audience are minor. The audience members remain in the traditional role of the "spectator-as-viewer" whose job is to decipher and understand a performance that uses new digital vocabulary to convey and communicate meaning, as is common in traditional aesthetics. The role of the performer remains central, but nevertheless having to adapt to the new tools, and having to share the stage with projected elements. In some cases, his/her role is more central than the projection, as in the scene of *The Andersen Project* (2006), where the projections frame and support the stage action. In other cases, the performer's role is relegated to a secondary position, as in the scene in *Ghost Road* (2013), where the projected actor is larger and brighter than the physical actor (and gets longer stage time).

3 Telematic performance: The spectator as user

Telematic performance uses telecommunication networks to establish links between remote spaces, using the Internet to transmit images and sound between two or more sites to create a shared performance event. There are typically two versions of telematic performance. One is high-tech; it uses teleconferencing to connect full body

performers in two or three dimensions, has high resolution, and is expensive and cumbersome - so technically complex that it needs to be mounted in a fixed location. The other applies low-tech, domestic technologies such as Skype, has low-resolution, is cheap and pervasive - technically so simple that it can be used anywhere.[21]

Contemporary examples of high-tech telematic performance are seldom presented in regular theatre touring circles, as these cannot provide the appropriate technological means necessary, and are either presented in technology-oriented events or remain within research institutions. Examples are *Panorama: a Multimedia Happening* (2009, linking Berkeley and Illinois) by Smith/Wymore Disappearing Acts, and *Ukiyo (Movable Worlds*, 2010*)* by Johannes Birringer.

Examples of low-tech telematic performance have started to emerge recently in alternative theatre and performance circles and also in circles that are part of the visual arts. There is *Skype Duet* (2011) by Brina Stinehelfer / Per Aspera Productions, linking a theatre venue in Berlin and a café in New York; Annie Abrahams' *ON LOVE* linking a theatre venue and nine English-speaking performers from their private homes located all over the world; Helen Varley Jamieson and Paula Crutchlow's *make-shift* linking two private homes.

Regarding space expansion, telematic performance aims at uniting two (or more) separate platforms into a unitary event, so interconnected that the one cannot take place without the other—the live and online, the physical and the virtual, the here and the remote. The way space is expanded in these cases is by the addition of the remote and abstract space of the Internet to the live performance site, where online activity takes place.

The Ethno-Cyberpunk Trading Post & Curio Shop on the Electronic Frontier from 1994 is the first of a series of experiments where performance artists Guillermo Gómez Peña and James Luna conducted ethnographic questionnaires online that were used as performance suggestions. In the performance, Gómez Peña and Luna transformed their appearances and behaviours according to suggestions provided by gallery visitors, visitors watching a video-conference feed online, questionnaires and data uploaded by online visitors. The work aimed at revealing people's racism by inviting participants to share their favourite sexual jokes, fantasies and encounters with a person of colour that the performers represented.[22]

In reflection on the role of the online platform, Gómez Peña explains how the suggestions provided by online users were more "confessional, graphic and explicit"

than the suggestions given by visitors on the site, which were more politically correct. He, on the one hand, argues that "the distance and anonymity provided by the artificially safe environment of the Internet short-circuited normal reserve and sensibility and fuelled more courage to reveal secrets and fantasies".[23] On the other hand, he also mentions how this distance and anonymity also afforded online visitors giving suggestions that were "outrageous", simply because they were not present and therefore could not experience the consequences to their instructions.

One could argue that the anonymity provided by the online platforms benefited the performance by fostering audience participation and affording uncensored conversations where political correctness may disable dialogue. Conversely, it could also be argued that it may limit the performance by invalidating those very conversations if they were not taken seriously by online users, since there were no direct consequences to their online actions.

It is the perceived "distance" by the audience and the anonymity that it affords, which seem to have an effect on the behaviour of the audience, and thus, on the activities that can happen in the performance. The distance between the physical performance space and the dispersed location of the spectators can be understood as a psychological space that can be used by the audience: they can remain observers, they can participate in a constructive way and help co-create the performance, they can challenge the performance by engaging in trolling behaviour, and so on. It is spectators who decide whether this participation will be transformative or not, by managing their investment. This imaginary line of possibility can be understood as a psychological space of freedom that can be used by the audience to transgress, perform or not: it is a space for reflection as well as for action.

The relevance of these findings to space expansion is that even though there is a very literal expansion of topographic space through telematic technologies (the audience is able to virtually connect with dispersed locations), the spaces where users are physically located do not seem to have an impact in the performance, if they are not physically present in performance space. There is not an attempt to incorporate users' physical locations (and its physical characteristics) in the performance or to problematize those extended spaces (as opposed to pervasive performance, where- as we will see later in the article- extended space becomes a fundamental element in the performance as a whole).

The function of space expansion here is to create a new kind of spectator-as-user: the online spectator. Psychological space is here used to describe the increased potential for freer and instruction-less audience participation. The consequences of the expansion of space for the online spectator are important. First, s/he does not have to go to the theatre, but the theatre goes to her. Second, even though she has the option of behaving as a traditional spectator that "views", s/he is offered the option of participation by typing suggestions, comments or uploading digital materials. In this sense, the invitation to participate can be understood as a way to overcome the lack of the elements that frame a theatrical event as such - the actors, the venue, and the other spectators, in a space where none of that exists. The consequences for the actor is that s/he puts her/himself in a vulnerable position, as s/he is inviting users to collaborate with her/him, knowing that s/he would not have any control over user's contributions. But s/he can use this as an artistic resource and challenge herself and the performance, as in the example of González Peña and Luna.

4 Pervasive performance: The spectator as player

Pervasive performance is a hybrid emergent phenomenon that seeks to engage participants in collaborative events through a combination of gameplay, media and performance. I have defined it as "mixed-media events that combine gameplay with performance, and use it as platform for potential collaborative art making in public spaces for a playing audience".

Established examples are works by German Rimini Protokoll such as *Call Cutta in a Box* (2008) and *Outdoors* (2011), and works by The British Blast Theory such as *Can You See Me Now* (2001) or *Rider Spoke* (2007).

Pervasive performance was born at the turn of the twentieth century out of the convergence of the fields of ubiquitous media, experimental game design and contemporary performance. As practitioners and designers started to incorporate mobile media to their productions – users were no longer fastened by cables to a computer – participants were able to be move across public and private spaces, constantly connected, on the move, and tracked by GPS systems.

In this category, space is expanded by technology in a literal, territorial sense. These events normally take place partly inside of cultural institutions such as theatre houses, galleries or community centres, and partly outdoors. Mobile media are used as a way to expand the playground for performance out into the public space, and

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multiple and mobile subjects are dispersed and distributed while still connected to the performance (and some cases, also to each other) via mobile devices. Technology expands the territory for performance, from a concrete venue where conventions regarding physical co-presence in a cultural institution operate, to the city space, where the audience is separated from each other and where they have to interact with the city and its inhabitants, a place where theatre conventions are substituted by social conventions of behaviour. But can the space for performance be accounted for? It is a multiplicity of trajectories all contained in the space of the city.

A project that explicitly aimed at training participants' "theatrical sensibility" in public space was this author's *Chain Reaction* (2009 and 2011)*, which aimed at using public space—its objects, peoples and interactions—as source material and inspiration for participants to make theatre. As participants arrived in the theatre building, they were instructed to complete a number of creative missions in the city environment, such as creating a short movement piece in a park, or get passers-by to sing their favourite songs. Participants later returned to the theatre building where they were asked to crosshatch the materials from the missions to devise a short performance out the experiences and materials collected on their journey. Every group performed its piece for the rest of participants—other players and the actors—and there was a final and informal vote to decide on the "best" show.

Chain Reaction altered the conception of the audience in that it facilitated participants to engage with space in a way that brought forth its playful and theatrical possibilities, making them see space with new, fresh, and 'theatrical' eyes. Furthermore, it also generated a situation where the interaction with space would have aesthetic consequences in the performance, as the materials collected were the main source to devise the performance pieces. In this sense, *Chain Reaction* sought to enhance the status of ordinary and everyday space – its routines and every-day activities – as legitimate materials for art-making while simultaneously lowering the threshold of participation so that players feel safe and secure playing with their own, familiar environments.

The crucial aspect of how space is expanded is the way in which moving the core action to the outdoors does not merely seek to re-locate the performance from the indoor of the theatre building to the outdoors, but rather seeks to explore the materiality of public spaces through play and performance. Jane McGonigal, when writing about ubiquitous games, argues that these games "make players aware of the

ludic possibilities of the world around them, exploring the site's objects, peoples and interactions".[24] The same holds true for pervasive performance, where participants are challenged to discover the place's "hidden affordances" through "sensuous activation".[25] This way, the participant becomes a fundamental part of the piece, with the capacity of being an agent that actively discovers while simultaneously being enlightened in and about the place s/he is in.

The consequences of this type of expansion for the audience are significant. The audience becomes a "playing audience" who fills the artworks with content. While using public space to achieve this is not necessary, as playing audiences can also exist in enclosed private spaces – such as in some improvisation and ritual forms – it affords a double gesture: to have the audience playfully explore the artistic possibilities of the world around them (see what can be transformed into art), and also to bring forward their own personal, artistic vision of that world (through composing the materials of the world through performance). The role of the performers also changes here, transforming into a facilitation and support of participants' playing activities, as performers become "orchestrators".[26] In this sense, performers partly become the new audience, as they are not the ones providing content but rather are facilitating content production.[27] Both roles, audience and performers, are blurred as they step into each other's tasks.

5 Discussion

I have shown across the examples how space is expanded in very different ways in digital performance, and how this expansion impacts the role of the audience, going from a "spectator-as-viewer" in multimedia theatre, a distributed "online spectator" in telematic performance, and a mobile "spectator-as-player" in pervasive performance. Even though space expansion may have other dramaturgical causes than the activation of the audience, the expansion of theatrical and ludic space implies redefining the role of the audience into active forms of engagement, a kind of "spectator-as-agent".

Existing discussions around spectatorship in contemporary performance and visual arts have focused on the political benefits of having an active spectator. Nicholas Bourriaud has theorised audience involvement as "relational",[28] while Grant Kester has described it as "dialogical",[29] both claims have been contested by Claire Bishop[30] and Jacques Rancière,[31] and then Shannon Jackson sees them as "heteronomous".[32] Gareth White urges us not to forget the important theoretical

contribution of applied and social theatre, where the aim to engage audience members in social activism and personal development has often been achieved through direct involvement in drama at the point of performance of a play.[33] These two strains of theory rests in the shoulders of practices in the twentieth century that have prioritized audience activity, well reflected in the early manifestos and essays of Antonin Artaud, Filippo Tommaso Marinetti, Bertolt Brecht, Jerzy Grotowski and Augusto Boal. The aim of fostering audience activation belongs to the cultural tradition of modernism, where authors invite participants to co-create artworks by using different strategies for physical engagement. Modernism advocates the democratization of the arts by empowering people through encouraging full participation in aesthetic acts and processes, highlighting the importance of the active agent in cultural production.[34] The avant-garde and more recent theories of performativity are highly indebted to this aesthetic rationale that see participation in the arts as empowering (Butler), transformative (Fisher-Lichte) and emancipatory (Rancière).

This body of works has debated the relationship between the aesthetic and the political: the consequences of audience participation (both 'active' and passive') for society as a whole outside of the aesthetic domain. Here Rancière has criticized the categorisations of active vs. passive spectatorship, arguing that active participation does not necessarily make a more politically engaged participant.[35] Both types of spectatorship contain the same possibilities, and one never knows exactly what activates people towards emancipation for diverse groups of people and/or individuals.

It is important to note how this discussion has happened in an abstract, theoretical level. Even though these sources have investigated participants' contributions to a performance to some extent, they have not really used participants' opinions or reflections as central material for research (the same way none of the three case studies analysed here conducted audience research). We still remain to re-examine these concepts (empowerment, transformation and emancipation) from the lens of those participants, testing if these hypotheses hold true. I cannot offer insights to how the audience was empowered, transformed or emancipated, but I can reflect on how the expectations around the role of the audience changed as a result of the expansion of space.

6 Conclusion

It is time now to revisit Dixon's previous claim where he argued that there can be an expansion of theatrical space as long as there are "spectators-as-viewers" located in the extended spaces. But what do these radically new conceptions of audience tell us about space and its expansion?

First, we learn that for space to expand in interesting ways, space does not only need to be able to contain or accommodate spectators, but it must also be able to support and respond to actions by spectators. In this sense, space is no longer expanded by the presence of "spectators-as-viewers", but also by the capacity of space to support actions and activities by the audience. It is not about presence only, but mainly about participation.

Second, the development of the "spectator as agent" can be understood as a strategy developed to compensate for the lack of physical co-presence that traditional performance offers. In other words, the lack of physical co-presence requires the development of other strategies to create a sense of being part of a performance event. Though there might be other strategies to achieve this, the ones I have analysed here point towards participation by the audience (online visitors or players) as the glue that ties expanded spaces to one same performance event.

[1] In this article, I borrow the following definition: "Digital performance concerns the conjunction of computer technologies with the live performance arts, as well as gallery installations and computer platform web-based net.art, CD-ROMS and digital games where performance constitutes a central aspect of either the content (for example, through a focus on a moving, speaking or otherwise 'performing' human figure) or form (for example, interactive installations that prompt visitors to 'perform' actions rather than simply watch a screen and 'point and click'". In Steve Dixon, *Digital Performance: A History of New Media in Theater, Dance, Performance Art and Installation*, MIT Press, Cambridge 2007, p. x.

[2] Greg Giesekam, *Staging the Screen: The Use of Film and Video in Theatre*, Palgrave MacMillan, New York 2007, p. 8.

[3] Christopher Balme, *The Cambridge Introduction to Theatre Studies*, Cambridge University Press, Cambridge 2008, p. 47.

[4] Balme, op.cit., p. 49.

[5] Marvin Carlson proposed a typology of forms that structure theatrical space that consists of: "Divided", "Confrontation" and "Apron stage", which are slightly different ways of diving the theatre in two main areas, one for the performers and another for the audience. "Arena theatre" is when the performance space is entirely surrounded by the audience, and "environmental" is when spectators can surround the stage/playing arena(s) or viceversa. In *Places of Performance: The Semiotics of Theatre Architecture* (Ithaca, NY: Cornell University Press, 1989).

[6] Dixon, op. cit., p. 413.

[7] Carlson, op. cit., p. 9.

[8] Balme, "Distributed Aesthetics: Performance, Media and the Public Sphere". in *Blending Media*, Theatrum Gedanese Foundation, Gdánsk 2010.

[9] The idea od being together while still being apart is extensively discussed by social psychologist Sherry Turkle in *Alone Together: Why We Expect More From Technology and Less From Each Other*, Basic Books, New York 2011.

[10] Dixon, p. 413.

[11] "Theater/Dance and New Media and Information Technologies.' (presented at the Working Groups on Dance and Drama, Research Group on Reorganisation of Professional Arts Education, Amsterdam, 1998) <http://www.art.net/~dtz/scott3.html> [accessed 14 February 2014].

[12] In a recent article, Ragnhild Tronstad explains how the concept of presence is a contested case in the studies of performance. "Often seen as a singular occurrence, it may also be approached as environment, in and through networks and by way of presence effects". She argues "focusing on the effects of presence instead of the ever-evasive presence itself may direct our attention to – and allow us to articulate – less obvious versions of presence that the ones contained by bodily proximity, such as, for instance, presences that appear to have no solid origin. Ragnhild Tronstad, "Presence and Mediation: On the Participatory SMS Performance Surrender Control (2001, Tim Etchells)", *International Journal of Performance Arts and Digital Media*, forthcoming,.p.2.

[13] "Being Here: Presence/Remote Presence Within Live and Media-Based Performance" University of California at Berkeley, 2007).

[14] Steve Benford and Gabriella Giannachi, Performing Mixed Reality, MIT Press, Cambridge 2011.

[15] "Trajectories indicate predicted and actual itineraries through mixed reality experiences. These emerge as a result of diverse types of navigation, journeying and mapping' (…).'Trajectories are paths of observation and experience that facilitate one's route through it", in Benford and Giannachi, op. cit., p. 15.

[16] Ibid., p. 105. p. 37.

[17] Hans-Thies Lehmann, *Postdramatic Theatre,* Routledge, London 2006.

[18] Postdramatic theatre that uses media has been called "Intermedia" by Greg Giesekam where media are combined in such way that 'neither the live material nor the recorded material would make much sense without the other' , p. 8., as opposed to *Multimedia Theatre*, where media merely support stage action. Freda Chapple and Chiel Kattenbelt, *Intermediality in Theatre and Performance*, Rodopi, Amsterdam, 2006. p. 12 have proposed the term *Intermediality* for understanding meaning creation in theatre and performance, which happens "in-between the performers, the observers, and the confluence of media involved in a performance in a particular time", despite of it following an Aristotelian tradition or a postdramatic one.

[19] Dixon, op. cit., p. 335.

[20] Ibid., p. 336.

[21] Erik Geelhoed, "User Requirements in Immersive Mediated Performance Spaces" (presented at the Remote Encounters Conference, Cardiff, 2013) <http://remote-encounters.tumblr.com/schedule> [accessed 8 May 2013].

[22] Dixon, op. cit., p. 500.

[23] Ibid., p. 501.

[24] Jane E. McGonigal "This Might Be a Game: Ubiquitous Play and Performance at the Turn of the Twenty-First Century", Thesis (PhD), University of California, 2006, p. 456.

[25] McGonigal, op. cit., p. 457.

[26] See discussion "Orchestrating Mixed Reality" in Benford and Giannachi, op. cit., p. 215-224.

[27] This comment refers to artworks from the visual arts that have a strong performative dimension. Therefore it can also be used to describe content creation by the audience in contemporary performance works. Grant H. Kester, *Conversation Pieces: Community and Communication in Modern Art*, University of California Press, Berkeley 2004.

[28] Nicholas Bourriaud, *Relational Aesthetics*, Les Presses du Réel, Dijon 1998.

[29] Kester, op. cit.

[30] Claire Bishop, *Artificial Hells: Participatory Art and the Politics of Spectatorship*, Verso, London 2012.

[31] Jacques Rancière. *The Emancipated Spectator*, Verso, London 2009.

[32] Shannon Jackson, *Social Works: Performing Art, Supporting Publics*, Routledge, New York 2011.

[33] Gareth White, *Audience Participation in Theatre: Aesthetics of the Invitation*, Palgrave Macmillan, Loondon 2013, p. 3.

[34] John Dewey, *Art as Experience*, Berkeley Publisher Group, Berkeley, 1934.

[35] Rancière, op. cit.