

**Digital Performance: How representations of physical and virtual
bodies inform identity construction / deconstruction**

A thesis submitted for the Master of Philosophy

By

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Abstract

The aim of this research is to develop an in-depth analysis of interactive digital performance. It investigates how identities are constructed and deconstructed by exploring the core subjects of physical and virtual bodies. I examine both my collaborative involvement with the Dap-Lab and my own creative practice in *Body Box*, and I interrogate how within these practices the relationships between real, imagined and virtual identities are realized. My analysis is based on 'Practice as Research', using qualitative methodologies. Here I examine qualities that emerge from embodied and digital practice by means of devising and performance making. I started with performance body and contextualised with other performance. The above choreographic performance/installations are used as case studies to demonstrate my methodologies. *The collaborative practice with Dap-Lab*, investigates virtual and real bodies in relation to interactive Musion three dimensional systems by incorporating wearable sensors and sensor technology in the performance. Along with primary research data gained from my own above devised performance, digital identities and multiple selves are examined through digital performance practice, specifically by exploring the core subject of the screen/body interface. In the practical element, sensors and computer technologies enable live interaction and modulation between the physical performer and the virtual surrogate in a series of increasingly complex responsive surroundings. By creating software and interactive video that generates digital doubles, multiples and surrogates, the research explores both physical and virtual bodies' embodiment and identity. Both theory and practice suggest a deeper engagement with the multiple selves/identities which can be constructed and deconstructed in digital performance, and in interdisciplinary or digital multimedia art forms.

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Introduction

My research investigates digital identity in an immersive and interactive environment. Significant questions posed are: how is identity constructed, what are the implications of projected bodies and does this extend the body in digital performance? Importantly, how do new technologies influence the way performance is created, understood, preserved and critically engaged within both live and mediated situations? By identifying and examining the above, I intend to utilise the unique field of digital performance to explore the relationship between technology and the formation of contemporary selves.

In Chapter 1, I outline a brief history of digital media performance and some of its key figures that are relevant to its development. I offer an overview on how art and technology are intertwined and relate to each other. I examine the investigations of the early Twentieth Century Avant-Garde, from film to video, which increasingly expanded the popularity of visual arts, dance, and performance art contexts of their respective times. I analyse digital practices and summarize how a variety of performance artists have employed autobiography and body-identity within their work. I site examples from Marina Abramović and Stelarc.

Chapter 2 focuses on autobiographical performance and digital autobiography. I mention how autobiographical performance serves the personal experience. Within Deirdre Heddon's autobiographical criticism, she explains the understanding that there are two 'I's, two selves, involved in the autobiography (Heddon 2002). This synthesis of object and subject is a key facet of modern contemporary arts. Artists such as Guillermo Gómez-Peña, Louise Bourgeois and Marina Abramović have all sought to bring identity into the performance and utilise technology to develop differing attitudes towards their creations. Their use of digital techniques to support multi-faceted performance has been a key to their development of the art form. I explain the notion of digital autobiography and show the resulting new dimension of the self.

In Chapter 3, I analyse identity in the context of practical performance. I explore theorists such as Sherry Turkle and Slavoj Žižek. I investigate digital identity as a new virtual self. As new media transforms culture, individuals are transformed into digital identities of the information age. In practical examples I show how bodies are presented in the Live and

Telematic performances of Station House Opera Company, with their unique physical and visual style. I also discuss the work of Stelarc in relation to identity construction in virtual and real bodies.

For Chapter 4, I analyse my own collaborative involvement with cross-media DAP Lab company projects directed by Johannes Birringer. As an early member of the DAP Lab from 2004, I put into practice both my theory and performance processes in the two most recent interactive dance performances (*Ukiyo and For the Time Being*). Firstly, I explore the interactive dance work: *Ukiyo (Moveable Worlds 2010-2012)*. I investigate the use of interactive telematics and instrumental bodies and I explain my two performance characters: ‘Hammer Woman’ and ‘Speaker Woman’. Secondly, I explore the abilities presented by sensor technology and the real time 3D Musion systems *For the Time Being (Victory Over the Sun 2012-2014)*. I do this by examining the relationship between physical and virtual bodies in form and identity within digital performance.

Chapter 5 concentrates on my own performance practice. I directed and devised *BodyBox* (2011). I explore the theoretical foundations of this work, the historical rationale for the work and how the project developed into process and on to final production. I examine elements such as performance and the performer, solo box, installation boxes, screens, video projection, the projectionist and performance technology. I analyse the concept of multiple selves and cross culture identity in digital performance. I refer to the elements explored in chapter two within the writings of Deirdre Heddon (2008), the concept that there are two selves, two ‘I’s, involved in the autobiographical form. In this chapter I contend that there are more than two selves present in digital performance, multiple selves. I examine the construction of personal identity; I question the conceptual basis and explore the definition quoting the works of Derek Layder (2004) and Charles Taylor (1989). Erik Erikson (1968) writes that as cultural changes have occurred new kinds of identity questions arise; Fred Davis (1992) points out that in everyday interaction, the body serves as a critical site of identity performance (1992: 10). Erving Goffman calls this ‘Impression Management’ (Goffman 1959: 6); a theory which defines the importance of human social interaction in everyday encounters. I explore Steve Dixon’s (2007) concept of the ‘digital double’ that indicates the human self has always been multiple. Taking my cue from these writers, I

suggest that a deeper engagement with these multiple selves/identities can be constructed and deconstructed in digital performance.

In concluding my final chapter I provide a summary of findings and reflect upon the emergent practices and theories within performance and technology. I also attempt to analyse the likely future developments within the field. I survey how the progressions within digital performance have influenced my own practical works. As a result of this analysis I conclude that digital performance is able to make the impossible become possible.

Chapter One: Digital Performance

In this chapter I will outline a brief history of digital media performance and some of the key figures that are relevant to its development. I will try to show how the theories and influences of history have been followed through into practice over time and how ideas and concepts that were once fringe are now every day. I will site examples from research including those of Laurie Anderson, Olan, Marina Abramović and Stelarc. I will then provide a brief overview of the questions dealt with later in my thesis and the concepts I am seeking to explore.

Through the last hundred and fifty years as mass production techniques and technological advances have been discovered and perfected, art, performance and technology have become intertwined (Packer and Jordan 2002) As new technologies have become available they have been embraced into the practices of the performing arts. The different practices of the arts have also combined through this time to create a holistic experience. Early proponents of holistic multimedia performances such as Richard Wagner foresaw the coming reality, Wagner's text *Outlines of the Artwork of the Future*, he states:

Whereas the public, that representation of daily life, forgets the confines of the auditorium, and lives in the artwork which seems to it as Life itself, and on the stage which seems the wide expanse of the whole world. (Wagner1849: 3)

This process has accelerated in the post war period with the development of personal, portable and digital performance technologies (Goldberg 2004). Parallel to these improvements in technology there has also been a constant evolution and mutation in what constitutes performance art. Pertinent examples in the development of performance art include Yoko Ono's *Wall Piece for Orchestra* (1962); Carolee Schneemann's *Meat Joy* (1964) and Marina Abramović's *Rhythm 10* (1973).

To provide a historical context we can trace the roots of performance art back to the early twentieth-century avant-garde movements, where artists experimented with projected film, visual arts and dance, as components of multi-disciplinary, multi-media artworks. These works gained recognition for performance art, and later digital performance, as distinct

creative genres (Dixon 2007). The most influential of these artists was Marcel Duchamp, who in his early career, created the cross-boundary work (*Fountain* 1917). *Fountain* was a mass produced 'Readymade' (TATE 1964) toilet bowl bearing the artists moniker 'R Mutt'. Readymades are everyday object selected and designated as art (Encyclopaedia Britannica 2014). *Fountain* set out to challenge the audience's perception of what constituted art and to embrace the abstract. This art sat within the Dadaism school (TATE 2008) where by the art is a 'performance' in and of itself. This art did not necessarily need to have been produced by the artist themselves merely to have been accepted by the artist. Dadaism can be seen to have been overtly political and often consisted of public gatherings and events where anti-war and left-wing sentiments would be discussed in parallel to that of the discussion of what constituted art.

Post-war performance art took many different directions, and saw the arrival of 'Action Painting' (Boundless 2014) where by the canvas is used as the stage of a performance for the dripping or splashing of paint. Sometimes the art created in this context was secondary to the performance itself. These events can be seen within the same context as the later 'happenings' (Rodenbeck 2011) of the 1960s.

Fluxus originated with the concepts of John Cage and his experimental music. John Cage and Richard Maxfield (Maciunas 1962) conducted classes at the 'New School for Social Research' in New York. These classes were attended by many artists and performers who were later to influence performance art for the next ten years. The key concept of Fluxus was that art could be indeterminate, in that it could be viewed from any starting point or end point for an equally valid response. In music this meant textures, drones and sound masses, rather than linear harmonies. In art this meant cards, envelopes, graphics and objects that were collectable and affordable. The aim was for art that could be taken out of the gallery and consumed from the street corner. Fluxus embraced a 'do it yourself' (Maciunas 1965) ethos in all media.

The Fluxus ethos created a number of new performers and artists who were keen to explore the possibilities of cheap mass produced art and follow in the self-produced ethos. This concept was equally popular in East Asia as in the United States and witnessed a number of influential figures emerge from Japan such as Yoko Ono or Shigeko Kubota.

Andy Warhol (Bourdon 1995) was another figure to emerge at this time and one who was to have a lasting influence on the mainstream. Warhol was one of the first artists to try to marry the developments in performance art with the available technologies of his era. Warhol conceived 'The Factory' (Jeffries 2014), his own studio complex in Midtown Manhattan, in order to mechanise the production of his art. From here he attempted to traverse the worlds of art, music, film and performance. In *Chelsea Girls* (1966) split screen technology is used to create contrasting images simultaneously splitting colour with monochrome while Warhol's 'house band' the Velvet Underground, who included John Cale, an early Fluxus disciple, provided musical accompaniment with droning dreamlike soundscapes. Other film works such as *Bike Boy* (1967) and *San Diego Surf* (1968) continued his exploratory approach and choice of challenging subject matter. By the early 1970's Warhol had become a recognised brand name for art and performance created from 'The Factory'. Sometimes Warhol's involvement was not immediately obvious and instead his influence and approval were all that was needed for works to be associated with 'the brand'. This has echoes with Duchamp's 'Readymade' from fifty years earlier and its influence continues to today with artists like Damien Hirst or Jeff Koons who conceive the ideas for their artworks but rarely manufacture the finished products that carry their names.

Laurie Anderson took many of the concepts from Warhol and Fluxus before (Cannel Street Communications 2007) and developed them for her own performance purposes. Anderson as a performer sought to challenge the audience with new and radical concepts that were often at the leading edge of expression and the available technology. In *Duets on Ice* (1975) Anderson played the violin while wearing skates frozen into ice blocks. Each performance only ended when the ice had melted sufficiently for Anderson to be freed. The violin accompaniment is formed by intertwining loops of music sampled against one another; this can be seen as the direct descendent of John Cage's works in the 1950's. In a continuation of this theme in 1977 Anderson developed a tape-bow violin that utilised recording tape within the bow and a magnetic tape bridge the audio effect being that of a dystopian sampling device where tiny fragments of audio are produced within the low hum of static noise. The audio fragments could be repeated or discarded through the performance and controlled or repeated by the violinist. This 'analogue sampling' approach was at the edge of what was then available to Anderson to utilise. As technology advanced into the early 1990's Anderson worked on what

became one of the first interactive Midi devices (REM Rapid Electro-Mechanical Design 2012), one that was modelled as a long stick. This device created a visual spectacle when operated, giving the audience a greater involvement and understanding of what was occurring and can be seen as the lineal pre-cursor to the ubiquity of the many contemporary performance midi controllers such as the KAOSS pad, a piece of electronic musical equipment used by musicians to create a limited variety of bleeps and basic drum patterns. (Giggles2009). Technologies such as this are now distinctly main stream and can now be seen in many different performing and recording contexts from contemporary rock with Muse or dance with Martin Garrix.

We now see Warhol's influence as central to the development of the creative process and Anderson's in the utilisation of the further developments of technological advancement. Other key figures embraced different approaches and pursued alternative avenues for digital performance. Stelarc can be seen in this context.

Stelarc's work chose to use the developments in robotics and ram controllers to create the performer as robot, the performer as cyborg. In works such as *Parasite: Event for Invaded and Involuntary Body* (1997) or *Exoskeleton* (1997) Stelarc's body is controlled by hydraulics, sensors and robotics strapped to his person, with the digital output from the performance being displayed on screens. While Stelarc is operating the hydraulics and robotics with his fingers the robotics and hydraulics are moving and controlling Stelarc's body. This creates an additional 'self' for Stelarc and the audience to experience, the robotic Stelarc. This experimental approach to bionics that was once the realm of science fiction is now a real and available technology. Wearable controllers whether prosthetic to aid performance or as monitoring devices are now commonplace in many contexts (FitBand, JawBone, Flex-foot) and have a central place in modern performance in many different arenas.

Stelarc's current works can be seen to be following in the footsteps of performance artists of the last forty years. Since the 1970s, Orlan, Guillermo Gómez-Peña, and Marina Abramović have all explored the use of body-identity. Orlan's aim is to take personal control over body-identity, to reclaim it as private property, and to aggressively react against classical and/or phallogocentric ideals of beauty. In doing so Orlan attempts to make one reconsider the

constancy of one's identity as inseparable from corporeality. She manages all of this by continually cosmetically/surgically remodelling her facial features (*Self Hybridization* 1993). Her facial identity is transformed into an endless identity-in-progress. Orlan's face becomes a bio-synthetic, sub-dermal insignia of volatility that 'addresses sexual politics, gender inequality, and cultural identity' (Pitts 2003: 03). In this context Stelarc and Orlan can be seen to have been divergent in their approach to body-identity.

Marina Abramović, a performance artist who has used her body as both medium and subject to experiment her mental, physical, and emotional limits, often creates a ground-breaking relationship between the audience and the performer. In Abramović's works (*The Artist is Present* 2013, *The Lovers* 1988, *Relation in Time* 1977), she points out the live work is preconceived and prioritized over the audience's response. In her own words:

First of all: what is performance? Performance is some kind of mental and physical construction in which an artist steps in, in front of the public. Performance is not a theatre piece.... It's more like a direct transmission of energy... The more the public, the better the performance gets, and the more energy is passing through the space. (Abramović 2002: 27)

In her statement of the self/other contradiction, Simone de Beauvoir defines one of the ways in which the constructed social hierarchy works in a way which is congruent to notions of the body and embodiment (Bergoffen 2003: 248). In such a discourse, man (as 'self') is conceivably represented to transcend, whilst woman (as 'other') is bound to the corporeal or the whole. While Abramović's interest in the body follows a course perceived and portrayed historically by artists like Marcel Duchamp, John Cage, and the post-war avant-garde, many of her performances push the body to extremes beyond the external social, cultural and traditional perception of our intuitive thoughts or challenges. By going to such excesses, she also examines what she sees as contemporary society's obsession with conquering the limits of the body (Denegri 1998: 18).

Moreover, Abramović uses the body as 'autobiographical material to explore the construction of identity and the writing of history on the body' (Armstrong 2005). The personal nature of the work, and elements of shamanistic ritual and transcendence in it, often produces criticism

that centres on the psychoanalytical. Discourses of psychoanalytical theory that focus on the Cartesian mind/ body split permeate criticism of Abramović 's work, with suggestions that she is acting out unconscious desires in the form of ritual (Turim 2003: 105). Although ideas of transcendence might seem to distance the relationship between performer and audience, Abramović's works produce set-ups in which, faced with the immediacy and directness of her living body, we, as an audience, are required to 'question our witnessing' (Turim 2003: 108), to look at how we interact with the performance, and to assess the extent of our responsibility to others, the body of the 'other' identity as a construct.

In the context of such self-aware performance it is pertinent to ask what tools there are at hand to help us get to know ourselves better. Autobiography has found itself a popular means for getting to know just who we are, casting ourselves as detectives to search through the historical evidence that constructs our lives and build a picture of ourselves. My own work has focused on my own life story, where I have begun to explore some of these issues I have experienced, and I believe that autobiography is an important concept in helping me understand my life.

As the self is divided the modern artist has conceded that there are parts of the self which will remain unknown, things hidden so deep in the unconscious that the conscious cannot get to them (Bal 2002: 187). Therefore autobiographies fail to adequately deal with the self as subject and new approaches are required. The auto-topographical model provides an interesting new perspective which places the visual above the narrative, experience over expression, and attempts to realize the abstract nature of thought in physical space. However, this form is still dependent on the viewer as 'second person' to create the meanings and is still incomplete as a picture of the self. In search of the hidden parts of the self a new wave of biography is creating new selves.

The integration of new digital media and performance techniques has created new ways of reflecting on old problems. The artist manipulates technology in order to generate new spaces to work in and so that various art concepts have to be re-evaluated. Memory is a good example, which when combined with technology becomes more concrete, certain and restorable. Computers are essentially 'memory machines' (Dixon 2007: 548) which, despite suffering the occasional system failure or memory loss; are designed to record beyond the

bounds of physical possibility. The abstract ways in which digital art can be manipulated are now more consistent with our own understanding how human memory is stored, not as a narrative, but as a series of groups. Memories are triggered by similar emotional contexts that occur when the memory is first stored or by external stimuli (Dixon 2007: 539).

Despite the variety of body-identity performances and the substantial body of writing in the field, the interest of both practical and theoretical approaches into digital performance is how both physical and virtual bodies inform identity, and how this identity is constructed and deconstructed in digital performance.

A central theme of this thesis is the proposition that body-identity based performance art practices, when considered from a broader, popular cultural perspective, can be read in relation to historical and current manifestations of digital performance.

This research project therefore focuses on the following questions: how is the self or selves questioned? How is the screen used? How is the body extended through digital performances? How do new technologies influence the way performance is created, understood, preserved and critically engaged within both live and mediated situations? How can methodologies in performance art play a role in a critical engagement with the politics of body representation?

In conclusion of this chapter, digital performance realises a conflict between the real and the unreal, one which other forms of performance would struggle to achieve. The integration of technology and immediacy creates a unique sense of time and space where things beyond the ordinary are possible. The works of certain defined theorists and practitioners, who are mainly concerned with media theory and practice in digital technology and contemporary performance, will be considered in the following chapters on autobiography and identity and how these can be explored through digital performance.

Chapter Two: Autobiography

In my previous chapter I explored digital performance, in this chapter I will focus on the theory of autobiography. I will look in greater detail at autobiographical performing artists such as Marina Abramović, Guillermo Gómez-Peña and Louise Bourgeois. I will examine the objectives these performers set themselves and how they use their choice of subject matter to illuminate the discourse. I will also examine how digital autobiography techniques are creating additional 'space' for the performer and that these new dimensions are allowing for greater expression and freedom to reveal the performers self.

Autobiographical performance / Objective and Subjective of Approaches

Autobiographical performing artist Marina Abramović has been performing her own life story in her performances since the seventies. Her latest performance *The Life and Death of Marina Abramović* (2013) was directed by Robert Wilson, according to Wilson: 'Marina told me a lot of stories about her family and parents situations, the sorrows and loves in her life. I constructed them into a visual poem about her life (2013).

Guillermo Gómez-Peña's autobiographical performance art is another outstanding example of contemporary challenges expanding self-representation. In *Year of the White Bear: Two Undiscovered Amerindians Visit the West* (1992) describes him and his partner:

Gómez-Peña and Coco Fusco, dressed up as exotic tribal figures from an unnamed and 'undiscovered' island, and exhibited themselves in a cage in London, Madrid, and New York. Counting on their audiences' familiarity with the colonial practice of putting native peoples on display for Western audiences, this ironic performance of racialized identity goes to the heart of questions of authenticity, truth, and audience expectations in 'nonfictional' self-representational acts. It too illustrates the continuing need for autobiography to be theorized complexly and rhetorically (Kulbaga and Hesford 2014).

From the study of Mieke Bal's 'Autotopography: Louise Bourgeois as a Builder' (2002: 180-202) the story of the artist seeps through into their artwork sometimes deliberate, sometimes incidental, but is always present. Autobiographical readings of artwork assume the

work openly expresses the artist's personality and narrates elements from their life experience. Autobiography therefore consists of narrative and expression (Bal 2002: 181). In particular the work of Louise Bourgeois comes to mind, whose aggressive and often industrial looking pieces reflect many aspects of her personal life and experience. Bourgeois makes consistent use of the concept of memories using various objects to symbolize them. The objects used are both from her actual lived experience and others are simply representative. The objects are caged within large installation spaces which for Bourgeois are known as cells. The cells 'trap' memories which cannot be read as narratives because they are personal and once placed in a public space they are no longer tied to one person. (Bal 2002: 182).

Bal also suggests 'autotopography' as an alternative to autobiography as it better expresses the process of the artist capturing their life in art. Particularly with the case of Louise Bourgeois, the production of artwork is the externalizing of the mind of the artist and attempt to take the viewer to the place in the artist's mind. Bourgeois wants to take the viewer on a journey into her unconscious and feel her experiences. In other words the visual nature of the art is more obvious than the hidden biographical narratives that lie behind its creation. Visual means of expression are better suited for turning the phenomenon of lived experience into art. According to Linda Anderson:

An autobiography can only be understood if the 'place' the authors themselves occupy in relation to their lives can be reconstructed by the reader. (Anderson2001: 3)

Thoughts are non-linguistic objects which exist outside of language and are unconscious. In order to produce autobiography one must take these ideas out of the phenomenal world and place them in reality. Written texts force translations whereas visual, autotopographical accounts, offer a more natural representation of thoughts and therefore the self.

The use of autobiography in performance is the use of the personal experience. Since the 1970s, art pieces in which performers act themselves, through stories from their lives have been seen worldwide. Similarly, theatre directors and writers draw on their stores of personal experience because all creative production is inevitably, as Deirdre Heddon observes in the

opening pages of *Autobiography and Performance*: 'infused with the personal' (Heddon 2008: 7).

Over the past two decades in England and America there has been a phenomenal increase in new performance works created by performance artists who have mobilized autobiographical material as the primary source for their devised projects. Heddon regards the productions of these artists as 'performances of possibility' because they invest the marginalized subject with agency and with narrative authority (Heddon 2008: 2), 'reveal otherwise invisible lives' (Heddon 2008: 3), and enable subjects who are marginalized by the hegemonic structures of Western society. According to Heddon:

Autobiographical performances provide a way to talk out, talk back. Talk otherwise (Heddon 2008: 3) In performances of the 'self', there are always, necessarily, (at least) two selves on stage at any one time – the self that is performing, and the self that is performed. (Arguably, the space between one and other is both the place and result of the creative process.) All of which raises the question, 'what is this "self" that is performed?' (Heddon 2002: 5)

One can therefore infer within autobiographical criticism, the understanding that there are two 'I's, two selves, involved in the autobiography is long accepted. What may be apparent or revealed in autobiographical performances, however, is the presence of these two 'I's, as the gap between one and the other is made visible (Heddon 2002).

Building on what the critics above have argued in my own performances of the self, the performers who play themselves show an intelligent self-consciousness; the 'self' is intentionally and incongruously used in order to accurately go beyond the self. In order that the 'individual self' is not foregrounded within the performance, it (or they, given that there is typically no singular self), is/are tactically and consciously destabilised (Heddon 2002). The performer can perform the self, but can we be completely certain of whom the self that is being performed is, or who the performer is? As both selves keep sliding, does the self become multiple selves? Does the self / selves no longer exist and is it / are they recognised as split, multiplied and merge with others? How referential or stable or truthful can this self, and its representation be presumed to be? Alongside the doubling of I, there is also a

multiplicity within the parodic representation, as the representations 'I' shift and each version competes with other versions. The contradictions and ambiguities are crucially important devices in undercutting the stereotypical representation and suggesting the inherent complexity of subjectivity, of 'having' a self and of 'being' a person. This is the self as a performative construct, with that very performativity revealed in autobiographical performances that perform the self (Heddon 2002).

According to Susan Broadhurst and Josephine Machon:

The implications of technology on identity in embodied performance; the discussion within it forms a forum of debate exploring the interrelationship of and between identities in performance practices, informed by new technologies. This collection considers how identity is formed, de-formed, constructed, deconstructed, blurred and celebrated within diverse approaches to technological performance practices.

(Broadhurst and Machon 2012: 1)

Before I further discuss technology and performance I will briefly give an account of digital autobiography.

Digital Autobiography New Dimensions of the Self

The genre of autobiography has found itself a popular means of getting to know who we are, casting ourselves as detectives to search through the historical evidence that constructs our lives and build a picture of the self. When presented with these facts, then what must we do? Do we write them all down in a narrative or do we pick up a brush and start painting? The journey into one's mind is an attempt to deal with the parts of the self that remain hidden in everyday life and ultimately to find out whom we are. My own work has focused on my own life story where I have begun to explore some of these issues and look deeper into the autobiography as a concept.

The multimedia techniques available to the modern artist are hugely diverse and therefore the means of expressing oneself has changed. Does this have an effect on how we

understand the self and others? Can we use these new digital media to create a new space for self-reflection: a digital autobiography?

An autobiography is a journey. It takes life as its subject and each story is unique. As Patti Miller (2001) writes the autobiography can be seen in two parts; both physical (textual) and spiritual (psychological) exploring and constructing an inner self. When someone writes a story about one's life reflecting on the events of life as they happened, often on a chronological basis, the individual comes to terms with the moral, ideological and more abstract notions of the everyday. The reflection of the mirror is immediate, but in contrast the reflective nature of autobiography is a slow, retrospective event often many years after the events happened. The result is a disconnection with the events, perhaps even as if one was describing the events of the life of another and therefore the opportunities for interaction are limited.

The process of autobiography fails to illuminate a 'true' self but instead creates a distant inner self. The autobiography thus serves to place this self within the world, just like the myths of the ancient civilizations, the self is placed at the centre of the great adventure of life and within the mysteries of the universe (Miller 2001: 168). The autobiography in this context is quite literally the story of a life, a story which ultimately serves to illustrate a sense of self and in effect create selves.

As a result the narrative of the autobiography plays a crucial role in the interpretation. It conveys our truths and values and generates representations of our unique view of the world and precisely why we think the way we do. These stories are little more than elaborations of the unforgiving mirror which haunted us in the introduction. They are caricatures of our own view of ourselves.

If we had no image of ourselves, no picture of ourselves in our mind, we could not exist as a self. (Miller 2001: 13)

In Miller's points, our mind is dominated by our own notions of selfhood and our identity is less the result of life experience and more a personal construct of how one wants to be or how one sees one's self to be. However, the ability to delve seamlessly into past life experience

cannot be taken for granted and poststructuralist thinkers such as Derrida and Barthes note that elements of the self are ultimately concealed or lost across interpretative boundaries such as language or the unconscious mind (Anderson 2001: 70).

Performance can provide a space for expressing parts of life that would normally remain hidden, as to reveal them in everyday life could lead to unwanted consequences.

Autobiography in the performing arts does more than merely make the self a subject, it allows the artist to 'see themselves in the process of being seen' (Freeman 2007: 11). The performer places their private life in a public space.

The life of an artist is often used in the analysis of their work as 'autobiography is a much mined resource' (Dixon 2007: 539). The personal, historical, psychological and social situations of the artist during the production of their work are valuable insights into the creation of art in general. Leonardo da Vinci was quoted as saying that all artists paint themselves (Bal 2002: 170) and much of art is a self-representational practice. According to John Freeman:

If art is part of one's being (of one's self) what is more logical than the self being part of one's art? (Freeman 2007: 9)

There are various digital forms in performances, for instance, video installation or sonic art, provide the artist with the ability of condensing a life history into a piece of artwork. In my own work I experiment with video installation in order to explore parts of my own life story, drawing heavily on symbolic objects, with abstract video imagery. My objects symbolized aspects of my life story, triggers of memories and experiences, and the video projection allowed me to re-examine events in my life from a different perspective. I deliberately chose to focus on a specific period of my life rather than my history as a whole, in a representational rather than realistic self-portrait. The live performance interacts with the space, the objects and video in an attempt to place real life alongside the virtual in a hybrid autobiography; thus such a digital autobiography shows a new dimension of the self.

In conclusion the autobiography is a much used and often confusing subject to define. It is essentially a dialogue with the self and forms a central part of writings on the self and the other. Autobiographies are formed from a combination of the narrative of life and the expressions of the individual which can then be captured in a variety of formats. The life of the artist has frequently blurred with their work and therefore, autobiography remains a strong theme in the majority of artworks. The visual world found more in common with the subject matter and transferring thoughts from the mind of the artist into a piece of art is a more natural process than turning memories into words. The spatial realisation of a life history or an autotopography is a more accurate means of making sense of the self through art.

The digital performer is able to utilize this and create a new space for self-reflection, either through complex avatars or through other visual installations. The self is projected through the technology and re-represented allowing the virtual and the real to interact. To realize a life story digitally allows an artist to access hidden areas of the self and examine themselves from strange new perspectives. The self becomes another, both subject and object, and in this new dimension the author can see themselves for the first time through new eyes.

Chapter Three: Identity

Numerous modern culture studies and various social theories have investigated cultural identity. A new method of identification has emerged which breaks down the understanding of the individual as an articulate whole subject into a collection of various cultural identifiers. These cultural identifiers may be the result of various conditions including: gender, race, history, location, language, nationality, religious beliefs, sexuality, aesthetics and ethnicity (Medlibrary 2013). In this chapter I focus on digital identity in a virtual environment and how to understand this as a new virtual self in contemporary society. I explore some theorists such as Sherry Turkle (1995), Slavoj Žižek (2004) and Ernesto Laclau (1994) amongst others.

Laclau was an Argentine political theorist often described as post-Marxist. The work of Lacan, Derrida, Foucault and Barthes had huge influence on him. Laclau investigates political phenomena on identities, discourse and hegemonies. He points out major issues raised by the emergence and transformation of various political identities in the contemporary world. Laclau and Žižek also worked together on books. They often disagreed each with each other on politics, Marx and on everything (Buchanan 2010). After examining the readings of Laclau while researching my work on identity in digital fields, I decided to concentrate more on the writings of Zizek and Turkle to support my argument.

Digital Identity New Virtual Self

In *Digital Identity* Phillip Windley states:

Digital identity is the data that uniquely describes a person or a thing and contains information about the subject's relationships to other entities. (2005: 8)

Internet users can establish their own social identity. This is known as their online identity. Use of the internet is having a large effect on how we relate to others, and how we view ourselves and others. Other terms sometimes used instead of online identity, include 'online persona', 'digiSelf', 'virtual identity', and 'avatar'. In modern times, people are creating online identities for themselves, just as new media is creating a new type of culture.

Digital identities mean we can be anyone or everyone when we are online. They can be ‘true’ selves, or they can be completely false. The significant interactions of digital identities are human-to-human, or more specifically, online identities interacting with other online identities in a virtual environment (Cubitt 1998). Digital identities are the performers who draw in the audience, and inspire the passive audience to become more active, interactive and creative. Online existence in online communities and digital identities are merely web-mediated human interactions. With this new medium come new cultures, new ways of presenting the self and interacting with others as well as interacting with the medium itself. Sometimes we represent ourselves online in narrative form, other times we can use visual images, videos, audio and music such as Facebook, Twitter, Skype and personal blogs.

Being online taking things and people at ‘interface value’ differs from face-to-face interactions, according to Sherry Turkle, in her work *Life on the Screen: Identity in the Age of the Internet*. She posits the internet as linking:

Millions of people in new spaces that are changing the way we think, the nature of our sexuality, the form of our communities, our very identities. (Turkle 1995: 9)

In 2008 Mark Meadows examined online identities and discussed the impact that virtual selves (avatars) have on people’s ‘real’ lives. There is no limit to how or within what parameters we can express or present ourselves online, as Mark Federman mentions in his interrogation of this concept through the metaphor of digiSelves, each with their own autonomous existence:

What was once integral – our self, our person, our identity – is now split among our self in the physical world and our many digiSelves, each having an autonomous life of its own. Thus, we disconnect from the normal experience of physical and corporeal time and space when we live vicariously through our digiSelf on the Internet. This disconnection is significant and profound, as our consciousness becomes disconnected from our sensorium, extends in a real sense into the world’s electronic nervous system and thereby creates the unique experience of separating our identity, or self, from our body. (Federman 2003: 8)

It is now possible for someone to create an online identity that is totally different from their real-world identity. For instance, they may choose a different age or gender. They may decide to limit what information about themselves to share online.

The virtual environment fulfils social and entertainment needs by providing the Internet user with a sense of self and community. However, digital identity existence for sharing Personal information publicly can be dangerous. Michael Heim in his text 'The Erotic Ontology of Cyberspace' (1993) had questioned the changes in personal identity with the ever-growing use of technological communication. Heim alluded to the danger of technology eliminating 'direct human interdependence' and argued that while technology may give us greater personal autonomy, it also 'disrupts the familiar networks of direct association', and we end up having less to do with each other, our communications growing more 'fragile, airy, and ephemeral even as our connections multiply' (Heim 1993 82: 108).

A digital identity is a manifestation of a real life identity that exists on the worldwide web, but it need not be a single identity. An individual can have numerous different digital identities to serve different purposes and needs. Sherry Turkle argues that because in 'computer-mediated worlds, the self is multiple, fluid, and constituted in interaction with machine connections' (Turkle 1995: 15) that virtual environments 'embody postmodern theory and bring it down to earth' (Turkle 1995: 18).

But the bifurcation of selfhood into poles of *virtual and real* may obscure the degree to which the real is itself virtual. As Slavoj Žižek suggested in every conversation we interact with invented selves, as virtual selves. in his talks on *The Reality of The Virtual* (Wright 2004): 'when I interact with you, this is not about the image I have with you, I am not dealing with the real you, I am dealing with a virtual image of you, and this image has reality.'

The division of someone into virtual and real parts might hide how the real self can also be virtual. Žižek argues that when we speak to someone, really we are speaking to a virtual being that we have abstracted from our view of the person's life (Žižek documentary film 2004).

According to Frank Vander:

The avatar of the online virtual environment, rather than representing a series of possibilities which we might actualize, instead symbolizes the perfection of the virtual individual we seek in our social interactions. (2008: 208)

What Žižek seems to be saying is that the physical, biological beings that each of us is constitutes a separate category of existence to the socially created, virtual beings with whom we interact. This suggests that the real is often virtual, and that the inventive, liberating, experimental nature of online avatars is little more than the conscious recreation of a virtual self that, in its virtuality, remains largely the product of unconscious modes of interpretation.

Live and Telematic performance - Station House Opera

Station House Opera Company is renowned internationally for its unique style, both physical and visual. The director is Julian Maynard-Smith. It spans the area between visual arts and theatre, which can be problematic. The company has created over thirty productions, including stand-alone pieces, and groups exploring general themes based on a particular material or methodology (Station Opera House 2013).

The company's numerous works include *A Split Second of Paradise* (1989-1990), *Piranesi in New York* (1988), *The Bastille Dances* (1989), *The Salisbury Proverbs* (1997), *Snakes and Ladders* (1998) and *Roadmetal Sweetbread* (2012). This latter, along with *Mare's Nest* (2001), created disorientation leading to a contemplation of the nature of perception and interpretation by using doubled versions of the action on stage. Bodies were doubled or tripled or, in the case of *Mare's Nest* even quadrupled in order to explore these matters. Other works such as *Live from Paradise* (2004-2005), *Play on Earth* (2006), and *The Other Is You* (2006) have, in contrast used the internet to bring the same single performance to various global locations.

Early this year I attended a performance of Station House Opera's latest production. The company, using the digital techniques of telematics, created their new show *Dissolved* (2014), which was performed simultaneously at The Beaconsfield, London and The Sophiensaal, Berlin. This new production took the audience into an uncanny world where

new and impossible spaces are created, dynamically connecting people from both cities, and giving audiences the chance to be in two places at once. Telematics is essentially the use of long-distance computerized technology in a performance that exists in its entirety online. As one live video-stream in one city merges with another in another city a new piece of work is created from its overlapping imagery – one image dissolving into another (figure 3.1).



Fig 3.1 Live video-stream between London artist Julian Maynard Smith and Berlin-based artists Florian Feigl. Station House Opera *Dissolved* (2014) Photo: Station House Opera

Dissolved enables the merging of performers and audiences in various global locations, each occupying the others' space. The space created is an ambivalent one; 'A door opens wide in one space as it slams shut in another. A wall exists and does not, putting up an invisible barrier. People and objects find they are both one thing and another, sometimes dissolving together to make a third, in a meditation on the instability of culture and identity' (Station House Opera 2014).

In an ambiguous doubled space. Each performer can be both a mind and a body – the mind of one person's body and the body of another person's mind. When these functions happen together, the combinations of mind and body form into chains. A chain of conversation and behaviour that forms a closed loop creates the implication of self-consciousness.



Fig 3.2 Live images from each city projected onto three screens above the actors.
Station House Opera *The Other Is You* (2006) Photo: Laura Chrostowski

The Other Is You (Fig 3.2) is a departure from the narrative dramatic structure of Station House Opera's earlier Telematic performances as the content and aesthetic concerns of this work model, rather than represent, everyday life. Thus, the ordinary daily activities of people conducting similar actions in faraway places take on deeper significance as they resonate across time and space. The work links three physical spaces: a former school in Groningen, a basement in Brighton, and the West German Gallery in Berlin.

While the work is innovative and highly original, we see that it reflects a tradition of spectacular events based on technology that dates back to the early years of the last century. It might be helpful here to mention a point of terminology that Station House Opera use. In *Three Way Interplay*, Jem Kelly' writes about the Telematic performance in devising the process of 'The Other is You', and he reports that they found the term 'persona', rather than 'character', more appropriate to describe the roles adopted by the performers (Kelly 2010:55). In many performances using video projection, there is a disparity or tension in the perception of the physical bodies of the performers and their two-dimensional representations on screens.

Virtual and Real Bodies / Identities - Stelarc

Stelarc, a well-known cybernetic body performance artist, seems to predict in his art that the modern techno-transformation of the human body that will result in an unpredictable, reconfigurable and plural non-normative or monstrous subject. He states:

It is no longer a matter of perpetuating the human species by reproduction, but of enhancing male-female intercourse by human-machine interface. The body is obsolete. We are at the end of human philosophy and human physiology. (Stelarc, 2002: 09)

He launched his art career in the early 1980s performing a series of visually excruciating suspension acts. Events such as *Seaside Suspension: Event for wind and waves* (1981) and *City Suspension* (1985) have the appearance of cultural rituals similar to Hindu religious rites or yogic acts. One could also associate them with a type of sadomasochistic astral projection exercise. However, Stelarc does not meditate prior to his performances and claims never to have had any type of 'out-of-body experience' (Dery1996: 159). He objectifies the skin and perceives it as a barrier destined for evolutionary penetration, as he states:

The solution to modifying the body is not to be found in its internal structure, but lies simply on its surface. (In Murray 2002: 81)

In his later performances, such as *PingBody* (1996), for example, his skin becomes a host for activation or signalling sensors. In addition, his body is transduced into a digital representation, transforming his corporeal skin into live data. The monitor screen on which his body is displayed becomes, as it were, an extension of his material skin.

It is not hard to detect the link between Stelarc's cyber-body performances and virtual body-identity. Stelarc forces the corporeal body to become an adjustable structure and these results in an understanding of corporeal identity as an alterable abstraction. In one of Stelarc's virtual reality bio-system events entitled *PingBody*: an Internet actuated and uploaded performance, which took place in 1996 at Artspace, Sydney Australia as part of the Digital Aesthetics conference, his body was connected to the Internet via electrodes linked to modems.

In this performance, cyberspace or virtuality becomes the new space of action and of movement. However, instead of disconnected body-identities (Net operators and online users) controlling the ebb and flow of information, collective online data activity is controlling (moving) the corporeal body.

Three ears are hardly a normal feature of the human body as one knows it. It is a form of anatomical inconsistency. In Stelarc's instance, one might refer to it as a form of voluntary abnormality. Here, cosmetic surgery and reconstructive surgery are employed, not for the prolongation of beauty or the rectification of irrational flesh, but for the purpose of designing a monstrous body. He writes:

It is not simply about the modifying or the adjusting of existing anatomical features (now sanctioned in our society), but rather, what's perceived as the more monstrous pursuit of constructing an additional feature that conjures up either some congenital defect, an extreme body modification or even perhaps a radical genetic intervention. (Stelarc 2003: 03)

One could read Stelarc's cyborg performances as post-humanist body art with the aptitude to change conventional attitudes toward controversial body-identities. He is progressively and systematically familiarizing viewers with the dissimilar and unstable profile of imminent cyborg body-identity. As an alternative to reading Stelarc's projects solely as evidence of the obsolescence of natural body-identity, one can translate them as confirmation that the obsolete body is rescued from total loss by the substitution of multiple monstrous and/or spectacular post-human/cyborg bodies. In relation to this, Chris Hables Gray states that:

Cyborging ourselves is costuming ourselves from the inside out, a disturbing techno-carnival with permanent consequences. [D]elightful and disturbing imaginings of beautiful and grotesque technoscience. Some dreams and some nightmares seem fated to come to pass. (2002: 193)

It is precisely these abovementioned 'nightmares' that Stelarc, without it being his chief intention, renders increasingly tolerable. With each new flesh-emphatic cyborg experiment his 'techno-surrealist sense of transgression' de-sensitizes the public (Badmington 2000: 98).

Each cyborg presentation is a step towards a high post-humanist era in which monstrous cyber-humans have become commonplace. Should one perceive this as a regrettable loss of human identity? Perhaps, given that this revolution is inevitable, one should exchange this cynical stance with a more optimistic one. Corporeal body-identity is not entirely erased.

What is more, it is not irreplaceable. Loss of human identity thus implies the inauguration of new transhuman or cyborg identities. It might just be that the transhuman/cyborg identity permits a far more extensive choice of body-identities with capacities that overshadow the abilities of the present outmoded natural body. In this context, loss of stable identity is balanced by the multiplication and diversification of body-identity.

To conclude this chapter, the world of the digital performer has offered new angles on many old ideas and concepts. The real and virtual cross over and the boundaries blur to the point where what is real and what is virtual are uncertain.

Julian Maynard Smith is the artistic director and co-founder of Station House Opera. Working with over 100 performers on various projects, the company has already produced over 30 productions. These include a wide range of scale and focus. They are all rooted in a single unified vision to make work that brings together theatre and the visual arts.

Stelarc's cyber-art is not restorative, but rather focuses on counteracting the obsolete material of body-identity by cyber-technologically generating a cyborg body that is excessive to the natural body.

Mark Hanson's book *Bodies in Code* (2006) about bodies in the real and virtual or cyberspace, states that Cyberspace is attached in the body, and it is the body not advanced computer graphics that allows a person to feel like they are really 'moving' through virtual reality (Hansen 2006). Hansen's book further explores that these computer-generated experiences are also profoundly affecting our very understanding of what it means to live as embodied beings. Hansen also draws upon contemporary work in perceptive science, new media studies, and visual culture, as well as websites, computer graphics, and new media art, to show how our bodies are in some ways already becoming virtual.

My previous three chapters sought to clarify the terms of difference between ‘Autobiography’ and ‘Identity’ in digital performance. In my next two chapters I will seek to explore the concepts of performance and how these are supported through research. I will proceed to clarify my findings by citing the work of eminent commentators supported by own practice and research findings.

Chapter Four: DAP Lab

In this chapter I will examine my collaborative involvement with the DAP Lab; which was created in collaboration with the Dap (Design and Performance) Lab teams. I will then analyse two choreographic performance/installations as case studies with my own choreography, ideas and contributions to the lab team. The first is the interactive dance work *Ukiyo (Moveable Worlds)*, which uses interactive telematics and instrument bodies. Through this I will essentially explore my two main characters, Hammer Woman and Speaker Woman. For the second case study, *For the Time Being (Victory over the Sun)* which used sensor technology and real time 3D Musion systems, I will examine the relationship between real, imagined and virtual bodies.

DAP-Lab (Design and Performance Laboratory) is a cross-media lab exploring convergences between performance, telematics, textile/fashion design and movement, clothing and choreography, visual expression, film/photography, and interactive design. Founded in 2004 by Johannes Birringer and Michèle Danjoux, I was the first member and have performed since joining it.

The expanded version of the original performance of *Ukiyo (Moveable Worlds)* was staged at the Artaud Performance Centre, as part of the opening of the Antoin Artaud building at Brunel University London in 2009. The European premiere of the work took place at KIBLA Media Art Centre, Maribor in Slovenia on 8th June 2010, and then it was performed again, with Japanese dancers present, at Lilian Baylis Studio, Sadlers Wells London on 26th November 2010 (see provided DVD documentation).

For The Time Being (Victory over the Sun) was premiered at the ‘International Festival of Digital Art’ at Watermans theatre, London on 26th May 2012. *For the time being: Audiophonic Design in Motion* also presented a demonstration of artworks from ACT I on ‘Tatlin Tower’ at Kinetica Art Fair London 3rd March 2013(See DVD). It was redeveloped and performed again at Lilian Baylis Studio, Sadler's Wells London on 3rd and 4th April 2014.

Ukiyo (Moveable Worlds)

Ukiyo (Moveable Worlds) explores the layers in a visual audio world that constantly shift and fragments; moreover take place in a mixed reality space. Audience is invited to move in and around the space which features five hanamichi (from the Kabuki theatre tradition and Western fashion runways) and several projection screens for the virtual world graphics and animated photography. The dancers perform simultaneously with digital objects that mutate. Dancers wearing Danjoux's designed garment which fused fashion and technology. Live sound music and visual choreography for *Ukiyo* are designed for the real time gestural interaction to animate feedbacks system and generative processes through with virtual space and physical performer movements are intertwined (DAP-Lab 2010). This was a continuation project developed from 2009 to 2010. performance by an international ensemble of artist from the DAP-Lab team collaboration with Butoh dancers and digital artists in Japan as part of cross-cultural research into virtual environments directed by Johannes Birringer (Centre for Digital Performance, Brunel university), and coordinated in Japan by Hironobu Oikawa (Maison d'Artaud, Tokyo) and Yukihiro Yohida (Keio University, Tokyo).

I perform two characters in *Ukiyo*, the Speaker Woman and the Hammer Woman, which are demonstrated in my DVD documentation.

Telematics and Instrument Body

In this section, I will briefly explain the telematics performances I had done before *TeDr* (2005) performed for Digital Culture Festival and the two case study performances *Ukiyo* (2009-2011) and *For the Time Being* (2012-2013), to analyse how wearable digital instruments can be played through movement. I will describe the wearable Prosthetic Arm on Hammer Woman and the two 20W suspended spherical loudspeakers which I carried on Speaker Woman characters in the *Ukiyo* production, and explore how the layers of perceptions in an audio visual world constantly shift and fragment.

Johannes Birringer is known as an academic of dance and technology worldwide. He writes:

In the artistic context of wearable performance, mobile control of transformability subverts the commodity aspect. The wearable rather points to fashion in the sense of re-fashioning, not just 'controlling' surface functionality in the interface, but challenging

digital transformation of the materiality of the body to provoke a new language through which discrete representation of the body can be generated and re-invented.

(Birringer 2008: 215)

Thus interface design is contingent on many specific articulating systems.

An early example of this is when I did a telematics performance is *Tedr* in 2005 with Dap Lab for the digital culture festival in Nottingham. In this, I was involved in a mixture of ‘live performance and fashion, interactive system architecture, electronic textiles, wearable technologies, anthropology and choreography’ (Dap Lab 2005). The project was based in cross continent online communication between Europe, the USA, Brazil and Japan.



Figure 4.1 Helenna Ren in the UK, and Keira Hart in Arizona, are touching each other's dresses. *Tedr* 2005(Photo: Dap Lab)

‘The new prototype is both personal and interactive; the experience of wearing is touching the other and being touched/wearing touch’ (cf. Gaines, 2000; Marks, 2002; Birringer, 2004). The important and significant aspects of all of this lie in the erotic qualities that arise between two dancers - me in a corset and Keira Hart in a hoop dress (Fig 4.1) rather than in any ‘semiotic tension’. The space we are witnessing is filled with questions that are cross cultural and founded in the notions of movement and virtuality.

How does movement and capturing of movement allow the design to emerge toward a garment testimonial, how are bodies-in-relation-to sensory fabrics affected by the

multidimensional kinaesthetics of a media-rich, responsive environment. Our notion of intelligent fashion thus refers primarily to movement, cultural expression in a broad range of performative situations, and the sensory experience of the wearers' bodies in relation to garments which are not 'set.' (Dap Lab 2005)

The previous paragraph introduced the category of the 'wearable' into the field of performance, and draw attention to the sensorial affect as interface, Birringer mentions:

How performance transforms design strategies for wearable and how the wearable experience affects highly mediated performances. Telematics performance implies the experience of being present at a location remote from one's own physical location, generally involving a camera based internet convergence between two or more sites; at the same time, the wearer of the wearable acts to enframe digital information, giving body to digital process and thus to her or his own intimately and affectively experienced sensation of 'wearing the digital' or becoming digitized.

(Birringer 2008: 216)

Numerous researchers, composers, and choreographers have started experimenting on wearable digital instruments and instrument bodies in recent years. A project called *Instrumented Bodies* (2013), by Joseph Malloch and Ian Hattwick at the University of McGill, researchers' project created these instruments and bodies at the input Devices and Music Interaction Lab (fig 4.2).

The prostheses are essentially musical instruments playing music based on touch, movement, and orientation, with the wearer making music according to her movement. There is an external spine and a touch-sensitive rib cage, both of which produce music according to body gestures. These instruments 'are a bending spine extension, a curved rib cage that fits around the waist and a visor headset with touch and motion sensors' (Malloch and Hattwick 2013).



Figure 4.2 Dancer Soula Trougakos wearing the spine, instrument design by Joseph Malloch and Ian Hattwick. *Instrumented Bodies* 2013 (Photo: Vanessa Yaremchuk)

The costume has embedded sensors, power supplies and wireless data transceivers, allowing a performer to control the parameters of music synthesis and processing in real time through bending movement, and orientation. These were designed to develop instruments that are visually striking, utilize advanced sensing technologies, and are rugged enough for extensive use in performance. (Malloch and Hattwick 2013)

In *Ukiyo*, the Hammer Woman's prosthetic arm (fig 4.3) is wearing a lycra all-in-one body costume, a necklace of tiny speakers and a hinged polypropylene prosthetic arm with an integrated bend sensor, eyelets and lacing features, and a talon extended hand clutching a hammer. These digital instruments created a kind of hybrid device that mixes performance, instrument, and the human body. Both characters in Hammer Woman and Speaker Woman, collaborated with dancers, musicians, composers and choreographers in the DAP Lab team.

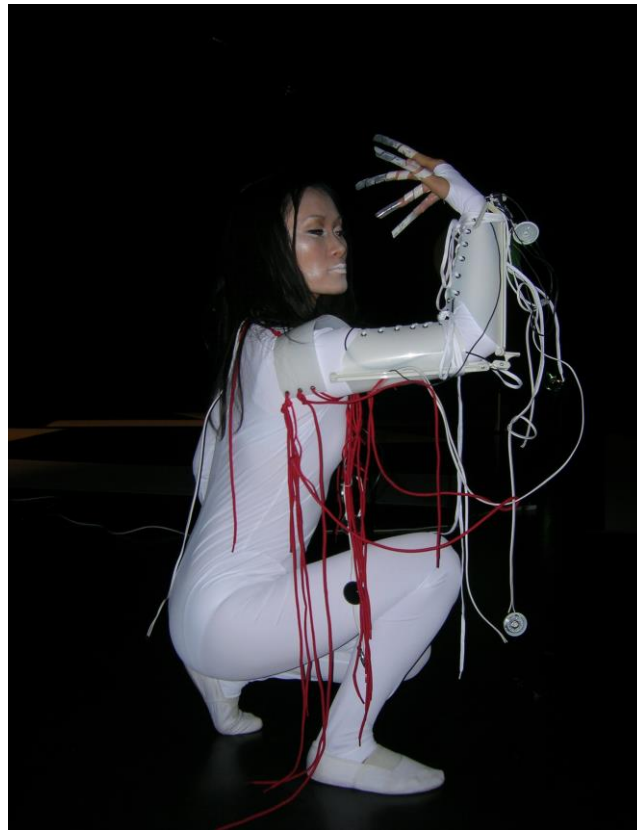


Figure 4.3 Hammer Woman Ren with prosthetic arm in *Ukiyo* 2010 (Photo: DAP Lab)

These instruments are the culmination of work between designers, dancers, and composers. These extensions to the body, which track movement are internally lit and have an arm with a bending mechanism. Unlike most computer music control interfaces, they function both as hand-held, manipulable controllers. For instance as the Speaker Woman, I carry martial bow with 20W suspended spherical loudspeakers (fig 4.4), and these new instruments intentionally blurred the line between the instrument being played and the performer's body.



Figure 4.4. Ren in audiophysics construction for Speaker Woman *Ukiyo* 2010

(Photo: DAPLab)

When I danced with and carried the speaker, I felt as if they were my extended hands and the cables behind me my extended span. When I wore the prosthetic arm with integrated bend sensor, it reminded me of Stelarc's visual probing and acoustic amplification of his own body. His work inspired me on my hand gestures and other body movements. In his *Third Hand* (1980) a mechanical human-like hand that is attached to his right arm as an additional hand appears (Stelarc 2013). It is made to the dimensions of his real right hand. This high-tech Perspex and metal forearm and hand is attached to his left arm and controlled through muscle activity in different parts of his body to stimulate the appropriate electrodes connected to different parts of the Robot arm. In *Handwriting* (1982) he held marker pens in his two real hands and one Robot hand and coordinates his movements for the three hands to write the word EVALUATION onto glass.

Since the very beginnings of his public work, Stelarc has been interested in the modification of the body by technology. In 2008 when I interviewed him, he often describes himself as 'the body' instead of saying 'my body', as he uses his body as a tool in his art practice.

In *Digital Performance*, Steve Dixon also draws attention to this 'body' subject.

He declared that:

Stelarc's objection of his body is total: he always refers to as a thing, and in the third person – as 'the' or 'this' body, rather than 'my body' – and in a 1991 paper in Leonardo he reconceived 'the body not as a subject but also as an object - Not as an object of desire but as an object for designing. (Dixon 2007: 318)

For Stelarc, the body has always been prosthetic, a site of radical experimentation that in his art has been objectified, penetrated, virtualized, roboticized, emptied out, alienated and suspended with such ferocity that the purely prosthetic quality of the body has been forced to surface (*The Monograph* 2005).

What happens with the body / bodies in more advanced technology, for instance with a 3D Mursion system, with 3D holographic images so real that they are indistinguishable from the live performers and presenters appearing alongside them? Before answering this question, I will give an overview of the *For the Time Being* production.

For the Time Being (Victory over the Sun)

The new dance was inspired by the Russian Futurist opera *Victory over the Sun* (1913) and most especially by its fantastical visual designs. The Dap Lab concentrates on the clichéd revolutionary discourse inherent in this early twentieth century multimedia opera using design, choreography and live music.

Victory over the Sun which was an early example of what is now called performance art, is a most curious artefact, based on the collaboration between composer Matiushin, a painter and violinist, the painter Malevich, who later became famous for his abstract Suprematist paintings, the poet Kruchenykh, and poet/mathematician Khlebnikov who had invented a non-sense language called zaum. 'We have come as far as the rejection of reason because another reason has grown in us which can be called 'beyond reason' and which also has law, construction, and sense...' (Kruchenykh 1913). Malevich said. It is possible that the sun, which in the opera is captured and eclipsed, is a symbol for reason itself, although it might also be a prophecy of solar or atomic power, 'locked up in a concrete house' that seems to

have exploded. Matiushin's music was a mysterious aspect of the original piece, since only twenty-seven bars of the original score seemed to have survived. DAP-Lab's new dance/music theatre work does not try to reconstruct the opera but uses its sound generated live by the performers, the special costumes designed by Danjoux, and the sound artists.

Featuring eight performers, the dance combines body-worn-technologies where the structure of the wearable has been developed alongside its interactive and sound generating potential for gestural performance, tuned to basic movement processes of amplification, reduction, distortion, and noise/communication.

It is a big production and took two years to develop. Here I mainly focus the 'Tatlin Tower' worn by me in the overture and the first scene of *For the Time Being* in the demonstration performance in the 'Kinetica Art Fair' in London March 2013, and how the 3D Musion system was used. The performance features and the construction principles of *Tatlin Tower* were 'a choreographic object' of the DAP- Lab with my own choreography in performance.

Musion 3D Systems

Musion is, as they say on their website, ' the global leader in the development, marketing, production and broadcasting of realistic, life-sized, interactive three dimension holographic video shows and effects. Musion's patented 3D technologies and imaging systems create spectacular, exclusive immersive telepresence technology makes it possible to simultaneously broadcast multiple live events to multiple venues located anywhere in the world (Musion 2014).

Musion's holographic projection system takes advantage of the most innovative twenty first century technologies, transforming the Victorian-age called Pepper's Ghost (Fig4.5) (Wikipedia May 2014), which is an illusion technique used in theatre, haunted houses, dark rides, and magic tricks. It uses plate glass, Plexiglas or plastic film and special lighting techniques to make objects seem to appear or disappear, to become transparent. Pepper's Ghost is named after John Henry Pepper (1821-1900) a British scientist and inventor who toured the world with his invention and essentially created the idea of the optical illusion, and who popularized the optical illusion into a state-of-the-art multimedia platform that enables

3D holographic projection; a jaw-dropping visual phenomenon that amazes and fascinates audiences of all ages the world over (Musion 2014).

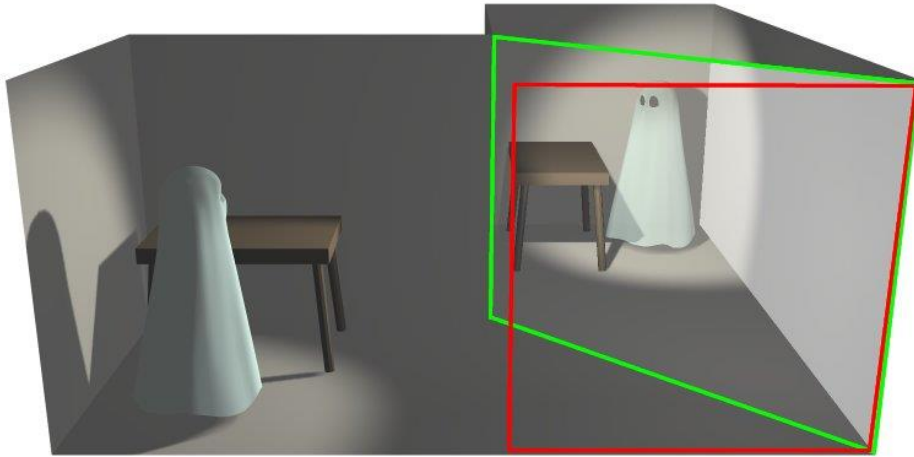


Fig 4.5. is an example of the Pepper's Ghost technique in 3D Musion. In this, a viewer looking through the red rectangle sees a ghost floating next to the table. The illusion is created by a large piece of glass, Plexiglas or plastic film situated at an angle between viewer and scene (greenoutline). The glass reflects a room hidden from the viewer (left), sometimes called a 'Blue Room,' that is built as mirror-image of the scene (Photo: Wikipedia 2014).

In *For the time being: opening of Tatlin Tower, Audiophonic Design in Motion* DAP-Lab presents a demonstration of artworks that aim to transform sensorial design into a fuller exploration of narrative, fashion, and choreography in live digital performance, displaying possibilities of new performer techniques with the potential for real-time, emergent / sound-generative design. When 3D Musion system is used, the presentation with 3D holographic images is so real that they are indistinguishable from the live performer and presenter appearing alongside them. It appeared on at least three of my bodies on stage (Fig 4.6): my real body, my virtual body and my 3D holographic body (See more images in demonstration performance in *For the Time Being* DVD 'Tatlin Tower').

According to members of the audiences, it is most interesting that my virtual body looks more real than my real body on stage. Unlike traditional 3D viewing Musion does not require

3D glasses because holographic projection is not a stereographic effect. Instead, the hologram illusion is created by using projection to provide the viewer's eyes with other visual cues – reflection, light, shadow, movement, and contrast that fools the brain into thinking it is seeing a 3D image. The illusion is truly astonishing. Musion 3D is an entirely new communications medium with virtually unlimited potential (Musion 2014).



Figure 4.6 in use of Musion 3D System *Tatlin Tower* performed at Kinetica Art Fair 2013.
(Photo: Jeremy Dives)

Physical and Virtual Bodies

Ukiyo explores how a tactile and auditory dimension of the world is created by the movement of the audiophonic characters and their actuation of their specially designed garments. As well providing the audience with an immersive experience in an invited moveable space, featuring five hanamichi (runways) and several projection screens for the virtual world, attention is drawn throughout to the wearable, enact sound technology.

According to Birringer, in his journal 'Movable Worlds/Digital Scenographies,' my team collaborator Doros Polydorou who generates 3D graphics has also made a case for the

importance of scenography and feels that sometimes it is considered an underrated craft compared to the attention given to directors, choreographers, composers, playwrights, actors and musicians (Polydorou 2011). Yet scenographic practices – including set, costume, lighting, sound and visual projection/video designs – are fundamental for the construction of essential (dis)orientations without which in fact no performance would take place (Birringer 2010: 2).

In ACT II of *Ukiyo*, an alternative, virtual stage with avatar dancers performing in Second Life establishes a mixed and augmented reality. Real and virtual dancers perform on the five runways in real space. Birringer sees the virtual body in digital performance ‘as an extension of these themes and practices’. Naturally, this virtual performance environment enables the linking of physical performance space with virtual space.

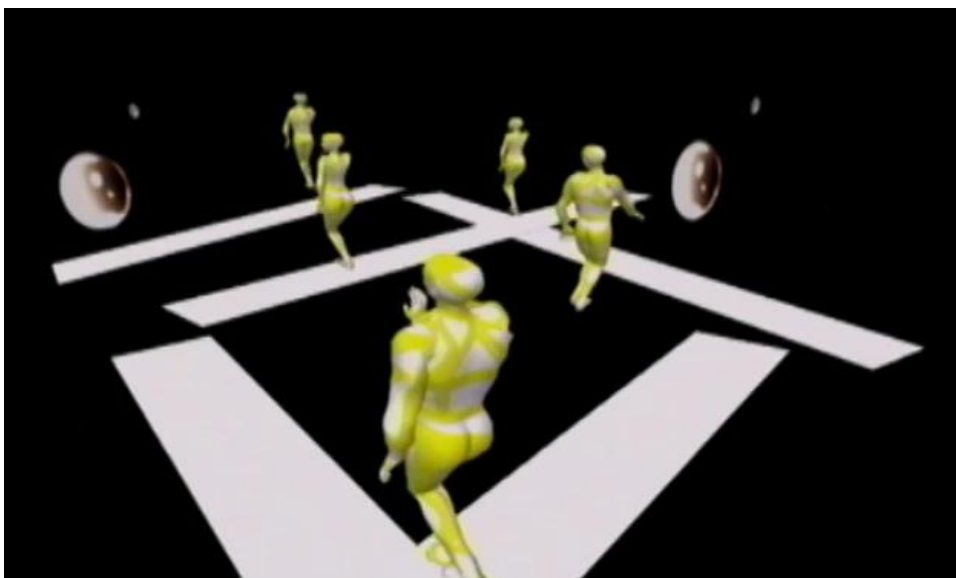


Figure 4.7. Avatar dancers in *Second Life* on five Hanamichi (runways). *Ukiyo* 2010
(Photo: Kabayan Kabata)

Moreover, *UKIYO (Moveable Worlds)* explores not just the visual but also how the dancer with costume capable of transmitting audios, armed with a functional microphone and damaged speakers to produced distorted sound. For instance, in my Hammer Woman character, my prosthetic arm with an integrated bend sensor supplies and wireless data transceivers, allows me to perform to control the parameters of music synthesis and

processing in real time through bending physical movement and as transformable living beings in both performer as well as audience movable world.

Dap Lab explores the manifestations and multiple forms of digital dance and experienced them in the wider arena of technologically mediated art. Birringer proposes that:

The more sustained lineage of dance on screen and live dance including projections of screen images offers a solid backdrop for understanding the compatibility between live performance and the moving image, between the polyrhythmic components of movement and the digital behaviour of images and sound. (Birringer 2008: 5)

In Ukiyo, each dancer has their own hanamichi to perform on. The lighting follows the dancers' physical movements, dimming at end of the performance. A child in the audience came up to me to scrutinize my arm with its 'bend sensor'. When my arm was straight there was no sound, but when I bent my arm there were whispers heard.

This communication produced an intimacy and an immersive experience for the audience.

Finally through exploration and examination in my collaborative projects, I have shown that the body can be used as an instrument and interface. In addition, wearables in performance can become choreographic tools through the embodiment and cognition of the performer; for instance, the wearables allow the performer to extend into the space sonically so that a small gesture might generate large reverberating sounds or large gestures initiate a subtle moving sound (my performance on 'Tatlin Tower' in *For the Time Bing*). Sensor technologies and real time 3D Musion systems are a new communications medium with virtually unlimited potential, a new future in digital performance between real, imagined and virtual bodies, and both audio and visual phenomenon that amazes and fascinates audiences in the twenty first century.

In this chapter I have investigated collaboration work with the DAP Lab, and examined qualities that emerge from embodied and digital practice, in the next chapter I will examine my own creative practice in the second case study by exploring the relationship between bodies and identities through the nature of devising and making.

Chapter Five: BodyBox



Figure 5.1 *BodyBox* (2011) presents a digital performance that interacts in real time and manipulates projection, vocals, objects, sounds and visuals. (Photo: Helenna Ren)

In my previous chapters the relative theories about autobiography and identity have been discussed, and the purpose of this chapter is to discuss how this theory was implemented in practice. Certain questions explore identity as well as the collaboration projects originated with DAPLab. In this chapter I investigate the research questions that are central to this thesis by concentrating on my own practice. I will focus on my directed and devised production *BodyBox* (2011), a digital performance that interacts in real time and manipulates projection, vocals, objects, sounds and visuals. By exploring the theoretical foundations of this work, I examine the *BodyBox* project element of the performance, the solo box, the installation boxes and the screen body interface. Moreover, I look at how the projectionist becomes part of the performance during production process. I also analyse deconstructed identities throughout the performer as well as explore on both a theoretical and practical basis these multiple selves/identities that can be constructed and deconstructed in digital performance.

The showcase was performed during the 'Research the Arts' conference on 15th and 16th June 2011. It was the third annual conference held at Antoin Artaud Performance Centre in Brunel University London. *BodyBox* uses Isadora software to construct a series of sequences to integrate a live feed camera with a series of videos, which combines live performance with a projected image. The aim is to produce a performance piece that fuses the real and the digital, where actions performed in real time effect the images that the audience see. This combination challenges the audience's preconceptions of virtual and real, how

representations of physical and virtual bodies inform identity construction and deconstruction.

I decided to take on the majority of roles required to complete this piece, primarily as a choreographer and director. I choreographed the movements for my performer and recorded the images for the video, as well as set up the software to integrate the two. I also required the assistance of the live feed camera, which needed moving throughout the piece. Producing *BodyBox* proved to be a demanding, intensive and emotional experience that took me on a journey into a unique world of the relationship between technology and the formation of contemporary selves in a digital performance.

History Rationale and Contextualization

The inspiration for the project came from my personal experience of travelling between England and Dubai. The necessity of shipping about twenty five boxes back and forth between the two countries (Figure 5.2). This shipping inspired me to develop the stage installation where boxes are used as a distorted projection screen throughout the performance (Figure 5.3). Often, these boxes sit unopened for many months after arrival, and I began to realize that they also contained memories from my journeys, which are ready to be unleashed.



Figure 5.2 Original shipping boxes. (Photo: Helenna Ren)

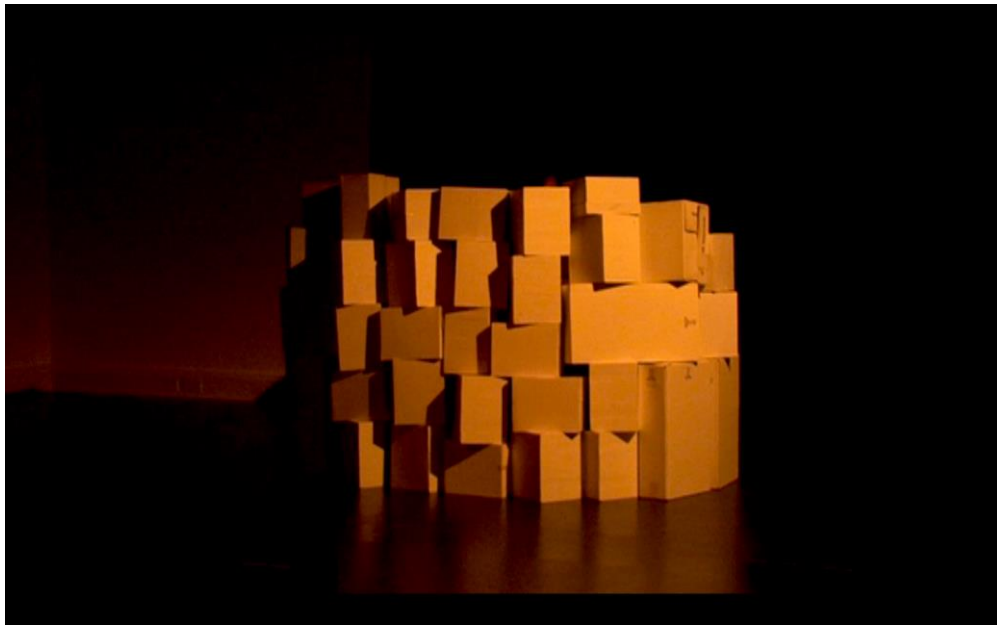


Figure 5.3 Installation boxes in performance. (Photo: Helenna Ren)

I appreciate that as artist we have the freedom that allows us to express our feelings and thoughts through our art works. It would be argued that: ‘life is art, art is life’, and sometimes art enable us to find ourselves and lose ourselves at same time. In *BodyBox* (2011) I introduce autobiographical material into an innovative use of stage space. Therefore, I use my life experiences as source material for an autobiographical performance.

The first decision at this point was to perform or not to perform. Having spent so much time centre stage as performer I was keen to step back and focus on directing. I began the project by managing a team rehearsing regularly with the performer of my story. Meanwhile, I was researching concepts from a number of theorists, namely Deirdre Heddon, Erving Goffman Steve Dixon and amongst others. Additionally, I was analysing works from well-known artists and groups as well as I explored autobiographical performers and artists, such as Marina Abramović, Guillermo Gómez-Peña and Louise Bourgeois.

The production investigates from the perspectives of design, creation and interaction qualities the real and virtual worlds. The use of software and interactive video generates digital doubles and surrogates by exploring both physical and virtual embodiment and identity in order to extend the body. Sensors and computer technologies enable live interaction and

modulation between the physical performer and her virtual surrogate in a series of increasingly complex responsive surroundings.

In Chapter Two, I mentioned how autobiographical performance serves the personal experience. This synthesis of object and subject is a key facet of modern contemporary arts. Artists such as Orlan, Guillermo Gómez-Peña, Louise Bourgeois and Marina Abramović have all sought to bring identity into the performance and utilise technology to develop differing attitudes towards their creations. Their use of digital techniques to support multi-faceted performance has been a key to their development of the art form. According to Deirdre Heddon within her autobiographical criticism, one needs to understand that there are two 'I's, two selves, involved in the autobiographical form and that this has long been accepted (Heddon 2002: 8). My contention would be that there are more than two 'I's in the world of digital performance and that these additional identities are made visible through use of technology and through the perception of the self or selves immersed within the experience.

Personal Identity

What is personal identity? 'What does it mean to be a person?'; 'who am I?', 'who I will become in the future?' Philosophers have discovered these questions throughout history in various ways, as well as absorbed themselves in the search for knowledge about the nature of being human. In the sense of personal identity, beginning with a structure like 'how a person defines who he or she is; self-definition or self-understanding.' is more accurate than identity in definite contexts. A lot of things might sensibly be involved in 'self-understanding' that we would not say are matters of identity. Derek Layder states:

In short and simple terms the 'self' or 'personal identity' is how a person regards themselves and how they, and others, relate to, or behave towards themselves.
(Layder 2004: 7)

Here, Layder posits slightly more formally that the self as a core of awareness, emotional desires and needs, in terms of which an individual acts and reflects upon her or his social surroundings. In a fundamental way if one says 'who I am' is an identity, this is speaking

about a part of ourselves that is important to us. *In Sources of the Self: The Making of the Modern Identity*, Charles Taylor mentions:

The question of identity is often spontaneously phrased by people in the form: Who am I? What answers this question for us is an understanding of what is of crucial importance to us ... My identity is defined by the commitments and identifications which provide the frame or horizon within which I can try to determine from case to case what is good, or valuable, or what ought to be done, or what I endorse or oppose. (Taylor 1989: 27)

Thus, in Taylor's analysis, personal identity is a personal moral code or compass, a set of moral standards or goals that a person uses as a normative context and a guide to act. It is clear that personal identity consists of a set of aspects or attributes of a person, for instance, physical attributes, membership in social categories, person-specific goals, beliefs, moral principles, desires, or personal styles. The elements that are found in virtually all the cases to which 'identity' is applied in ordinary usage are frequently disclosed by events which occasion their loss, for instance, of self-respect, personal style, personal ethnic or religious identity, the particular resident culture I fit in to (neighbourhood, country club, etc.). All of these are things understood as building up one's personal identity, also the things that help to distinguish us as individuals taking pride in them, desiring well-being and self-confidence.

In relationships and their dilemmas, personal identity is false at the crossing between two distinct but overlying realities or universes, individuals (psychological reality) and society, or social reality. These realities are dependent, one could not exist without the other, but at the same time they have their own distinct characteristics. That the self is created in the subtle, combined effects of these different but connected realities has, more often than not, been overlooked (Layder 2004: 89), as in the self as emerging exclusively from individual (personality traits, instincts, mental constructs, innate motives) or from social forces (values, discourses, class, gender). Both views overlook the complexity and subtlety of the relationship between individual and social realities, as well as how their distinctive characteristics differently influence the creation and renewal of the self in everyday life.

Hence 'identity' in its existing embodiment has a dual sense. These days identity is considered as existence of the mixture of multiple elements in: gender, age, personhood status, and sexuality. Frequently these notions are observed and presented as universal, eternal and unchanging. This presumes an essentialist position with concerns to human nature, that is, that we are all the same across time and space. This chapter explained the construction of identity, what the personal is and how it is undermined by common social experience and so on. It enables us to put our own identity in perspective while others are life enhancing, by understanding personal identity it allows us to gain insight into our own personal world and how we can gain more from our experiences, experience life in a way that is distinct from others, have our own unique take on the world. Nonetheless each of us is deeply influenced by neighbouring society; we are all also exceptional individuals.

Social identities can also use our personal characteristics, our interpersonal relationships and roles and autobiographical narratives about our lives to define ourselves and our own uniqueness further (Stryker 1980; Deaux 1992, 1996). These multiple identifications with different roles, attributes, social groups, narratives and relationships, assist us to express, orientate and place ourselves in a world of relations to others, surrounding, and individuals. It should be acknowledged that these identities establish only one part of the multiplicity of identities which constitute our self-conceptions. According to Derrida (1981), identities are constructed within, not outside, in relation to the other, and in the process of transformation and change. 'Identity' can be constructed.

Identity Perception in Performance and Technology

From around nineteen sixties onwards, artists have dealt with the complexity of identity. The works I am going to consider do not, I think, attempt to avoid any constructed identity in order to get an 'essential' self. Instead artists accept that identity is a construct, and focus on exactly how and why these systems which construct identities exist, with a view perhaps that with understanding cause and effect, we may take responsibility for our part in this construction.

The term of performance (or live arts, which is increasingly being used in Europe), has many definitions that range from anything time-based, to work with at least a minimal focus on process. A large proportion of artists referred to as 'performance artists' work with

performance as one form among many. Their use of this marginal form comes sometimes to define them. However, many of these artists come from a visual arts background, and it is revealing that they have chosen the performance mode to investigate the complex, and often provocative, question of identity in contemporary times, a mutual opinion of reference with which to statement the recurring theme of the nature and construction of identity.

In Marvin Carlson's excellent book *Performance* (2004), he makes the distinction about performance:

The recognition that our lives are structured according to repeated and socially sanctioned modes of behaviour raises the possibility that all human activity could be considered a "performance," or at least all activity carried out with a consciousness of itself. The difference between doing and performing, according to this way of thinking, would seem to lie not in the frame of theatre versus real life but in an attitude - we may do actions unthinkingly, but when we think about them, this introduces a consciousness that gives them the quality of performance. (2004: 4)

When we know that we are projecting an identity, we are acting an identity, for example, when we introduce ourselves to someone. If we are communicating using computer technology, we are projecting ourselves through the medium of the technology, whether this is using a word processor, e-mails, an online game, and web-pages.

The multimedia techniques available to the artist are huge and therefore the means of expressing oneself has changed. The information age gave people new ways to fulfil their basic human needs, to be connected to others, self-expression and to belong to a greater community.

The Performer, Multipleselves and Cross Culture Identity

Often when we consider identities we are questioning 'who am I?' we are asking this question at a particular time, moment and a place in our lives within certain cultures or settings. This self-questioning marks us on a certain level of awareness by what is happening around us. According to Martyn Barrett, the large numbers of different identities need to be observed; ethnic and national identities are no longer our only identities, and we all have various identities that rooted in different aspects of our self-perceptions, (Barrett 2010:

45). It can be noted that this does not easily capture what is meant by referring to ‘national identity’ or ‘ethnic identity’. For instance, is national identity a nation in all places and times, or the state of being this nation and not another?

Steve Dixon’s text on ‘The Digital Double’ he concludes the digital double is a mysterious figure which takes various forms and undertakes different functions within digital performance (2007: 268).



Figure 5.4 Minien dances with her digital double in Ren’s *BodyBox* (2011).
(Performer: Katie Minien - Photo: Chikukuango Cuxima-zwa)

I am Chinese and British; my performer / double, British and Indian. We have completely different backgrounds and different looks, yet one autobiography is performed in *BodyBox*. How identity is constructed here is that my two ‘I’s, and the two ‘I’s the performer performs, and when the performer performs with her own double, the original ‘I’ sees two of myself /selves, or even more, in a digitally generated staging. While sitting on the stage (figure 5.4) she contemplates. Her body projects onto the white wall on the left, her digital double; the real and the virtual, the flesh-colored real body and the figure made up of black and white dots on the wall; like a memory, blurred, fuzzy. She walks, she travels, her feet project on the installation boxes; just her feet, (her real body, her full body is on the stage), her feet travel on the boxes, each step symbolic of a year of her life from 1997 to 2007. She then starts to

dance around the box; her body projected onto the right white wall, and she becomes multiple selves.

Dixon indicates the human self has always been multiple however new virtual environments have allowed for a deeper engagement with these multiple identities (2007: 269).

In *BodyBox*, the performer is performing both the object and subject of 'I'. The person who performs me and my story in classic autobiographical form is also the subject of the story; the subject and object are one (Heddon 2002). Nevertheless, as proposed above, between the performer who performs and the stories being performed, there are at least two other 'I's: the 'I' who is performed and the non-performing 'I'. According to Breger:

Identity is a way of expanding the concept of self to include social factors.
(Erikson 1974: 329)

In his book *Identity, Youth and Crisis*, Erik Erikson (1968) writes that culture is as unfathomable as it is all-pervasive, it deals with process that is located both in the core of the individual and in the core of the communal culture. As the culture changes, new kinds of identity questions arise, for example, on issues of social protest and changing gender roles that were particular to the 1960s (Erikson 1968: 42). Fred Davis points out:

In everyday interactions, the body serves as a critical site of identity performance. In conveying who we are to other people, we use our bodies to project information about ourselves (Davis 1992: 10).

Yet while we intend to convey one impression, our performance is not always interpreted as we might expect. Through learning to make sense of others' responses to our behavior, we can assess how well we have conveyed what we intended. We can then alter our performance accordingly. This process of performance, interpretation, and adjustment is what Erving Goffman calls 'Impression Management' (1959: 251). The theory defines the importance of human social interaction in everyday encounters. Each encounter can be described as a 'performance', where the participants adopt the roles of performers and audience.

During the performance, each participant acts out a character - the 'self' - according to his or her understanding of the encounter and aims ... The self, that is being presented, is constructed from verbal and non-verbal cues given or given off to others with the aim of purpose fully creating a particular impression (Goffman 1959: 1-6).

According to Erving Goffman when individuals meet to interact, they have to present themselves. However, this is by no means a small issue.

The self-presented to others is not an organic thing that has a specific location, whose fundamental fate is to be born, to mature, and to die; it is a dramatic effect arising diffusely from a scene that is presented. (Goffman 1959: 252-253)

This process also makes explicit the self-reflexivity that Dixon augmented earlier on in the emergence of the self and reflecting the double:

The double as a spiritual emanation symbolises a mystical conception of the virtual body, performing a projection of the transcendent self or the soul. The manipulable mannequin, the most common of all computer doubles, play myriad dramatic roles: as a conceptual template, as a replacement body, and as the body of a synthetic being. (Dixon 2004: 268-269)

Dixon describes the digital double 'as reflection', as 'alter-ego', as 'spiritual emanation' and as 'mannequin' (Dixon 2004: 244-259). What happens to this doubling in multimedia images through digital technology? For instance, my performer is doubling me, and she performs fascinatingly with her own several double images through real time video projection, with interaction between the live play and the pre-recorded video imagery. These multiple 'selves' are embodied on the stage, and the identities of the artist, the performer, the artist, become hybrid in a digital performance.

Herbert Blau states in *The Eye of Prey*:

There is nothing more illusory in performance than the illusion of the unmediated. It can be a very powerful illusion in the theatre, but it *is* theatre, and it is *theatre*, the truth

of illusion, which haunts all performance whether or not it occurs in the theatre, where it is more than doubled over. (1987: 164-165)

In other words:

There is nothing in the screened technologies of the virtual that has not been already performed on the stage. The theatre has always been virtual, a space of illusory immediacy. (Blau 1987: 164-165)

How do we understand the processes of performance which gather with mediated technologies of representation and represent and validate mediated subjectivity? Matthew Causey discuss the moment when the double appears and the live actor confronts his or her digital 'other' (Dixon 2007: 269).

Notions of the self are now being reconfigured, with new technologies playing a part in producing new perspectives on identity in the twenty-first century. The human self has always been multiple, however new virtual environments have allowed for a deeper engagement with these multiple identities.

In new media performance works and digital culture, everything becomes embodiment. The performance work of the classical post-modernist Wooster Group, the obsolete body of Stelarc and the post-colonial cyber-performance artists Guillermo Gómez-Peña, are all in the process of embodying mediated subjectivity and representing that experience in performance.

Also, in the relationship between the real and the virtual, sometimes it seems the virtual had taken over the real, and becomes more real than real in a digital performance. The physical body and its subjectivity is extended, challenged, and reconfigured through technology. Considering identities, it also informed by new technologies in performance. Identity is formed, de-formed, constructed, and deconstructed. Identity and the self / selves blurred, split, multiple and fluid in the digital performance.

Solo box, Installation boxes and Screens

The set up (figure 5.5) in the studio involves thirty-five installation boxes and one big solo box used as screens. Two Mac books are also used, with one mutilating live sounds and the other generating live visuals. There is also a lighting desk, a real time camera, a documentary camera, a moveable projector and a chair.

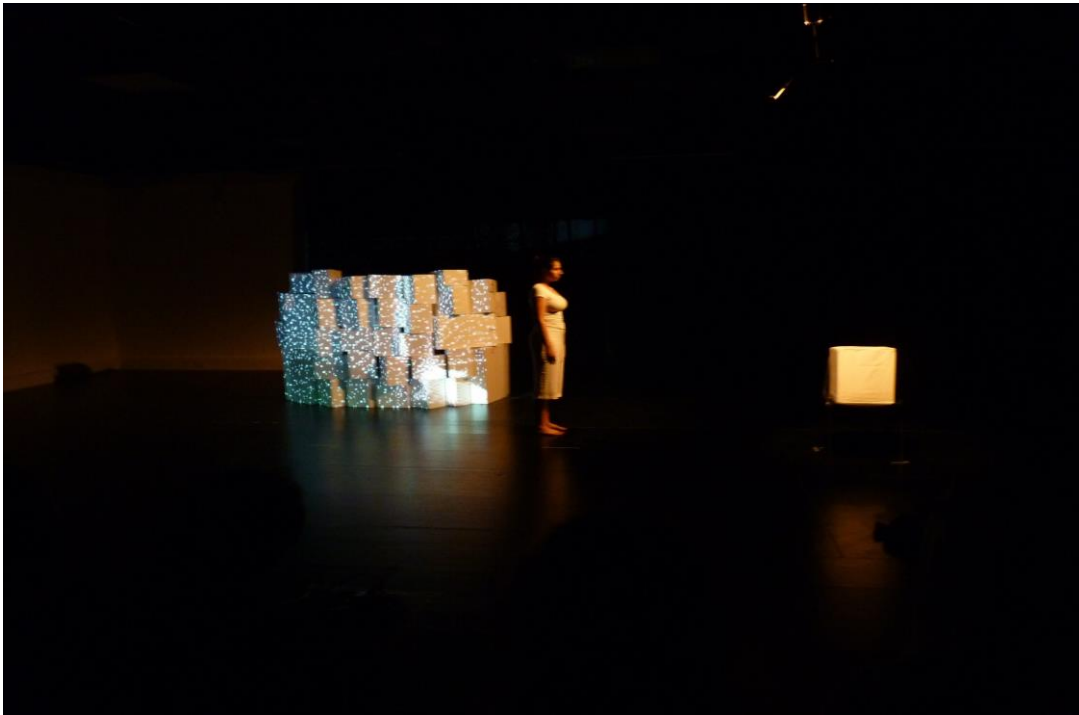


Figure 5.5 Stage set up: Installation boxes, the Performer, the Solo box. (Photo: Helenna Ren)

It is worth here articulating why I chose to use installation boxes and the solo box as a screen. I wanted to play with scale to place the performer's face in a giant box on screen (Figure 5.6). Often, we see flat screens in cinemas, televisions, and theatres. Generally, the images projected onto these 'everyday' screens are not challenging; they essentially reproduce reality as it is perceived by the eye. Instead of us (unconsciously) seeking beauty and perfection in and around society through these screens, I rather challenge this and ask - why not investigate distorted images instead?

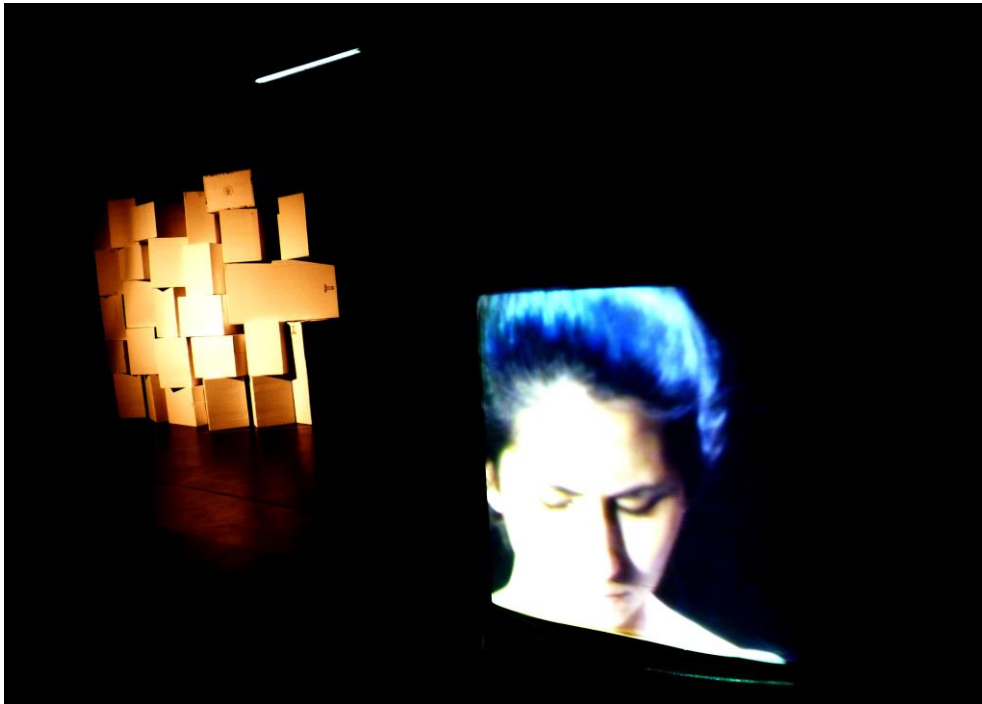


Figure 5.6 Installation boxes, scaled face projected in real time on the solo box.
(Photo: Helenna Ren)

What happens when a beautiful face becomes stretched, squeezed and imprecise? Images are distorted. How can we project this human face in a 3D object to explore and further consider the quest for identity? What emerges from this is a sense of timeliness within early twenty first century thinking about performance, identity, culture and the impact on all of these of digital technology.

As a performer I have a lot of experience moving in physical space so I needed to extend the performer reach and transcend from physical to virtual space. I intended to project a pre-recorded video of the performer's face and also live feed of the performer onto the installation boxes and the solo box, and examine the relationship between the live performer and the video. In addition, I was eager to examine how vocals, visuals, sound, image and live performance can combine to create unique performance experiences.

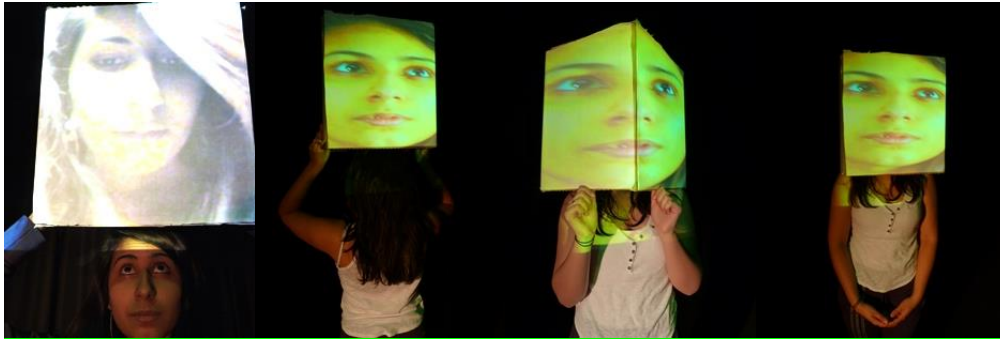


Figure 5.7 pre-recorded face projected on solo box with live performer. (Photo: Helenna Ren)

Throughout the development, the piece essentially was developed from three ideas. The first was that I wanted to use both solo box and installation boxes as screens, to portray my ideas of digitised images on them. With the solo box, I mainly just wanted to project the performer's face (Figure 5.7). The installation boxes are used as an installation in the space as well as part of the screen. Secondly I used all the elements in the real time camera during the entire performance. Finally I wanted to experiment with vocal expression to discover how sound can alter the performance environment and create a dialogue from performer to audience, for instance, when the performer sings, the image on the solo box moves, when she is silence, the image stills.



Figure 5.8 Vocal controls Image in real time with the live performer. (Photo: Helenna Ren)

While all this is happening, she sings in Chinese, Italian and German: ‘Who am I? Who am I not?’ When she sings, her projected image is on the box in motion - the image is changed by her vocals and is removed by her silence (Figure 5.8).

I had created the performance timeline carefully for on every single aspect, including the performer, sound, voiceover, visual, lighting, cameras and movements. Visually I used real time on camera testing in the studio, and started to experiment with the performer to see how I could bring the performance and the real image together. I used Isadora to allow me to set up the sequences that I desired which enabled me to explore the full capabilities of the live feed and provided me with the opportunity to further develop my concepts.

When the audience walks in, we pick up the noise they make, such as from the walking steps, the opening door, the cough, the chair moving and the whispers. We generate all sounds live and mutilated to a sound scope that echoes in the space.

Then silence.



Figure 5.9 Performer and the Box positioned correctly on the stage at different levels.

(Photo: Helenna Ren)

There is my voice-over at the beginning of the performance, the homonym, the calling of the performer who comes out from hiding behind the boxes - ten years of travelling in words of counties and years. With a piano background, my pre-recorded voiceover came in with years and names of countries. This voiceover created rhythm for the choreography of the performer's movements, and each year is a slow and heavy step of my journey from China in 1997 to London in 2007. All this plus backgrounds of soundtracks and her voice in the use of echoes and delay, which the computer mutilates live. Software is Logic pro and Max MSP.

Lighting was highly choreographed on house light, spot light, side light and black out. Moreover all used carefully on the right cue right position, as if too bright or too dark it will affect how live visuals look.

Real time camera setting is very important as it captures in real time the performer. While dancing with the box, the performer needs to be positioned correctly on the stage at different levels (high, medium, and low), facing the correct directions and making the correct movements (Figure 5.9). The performer must be highly aware of how to work with the real time camera and with the projectionist who projects the image on the box.

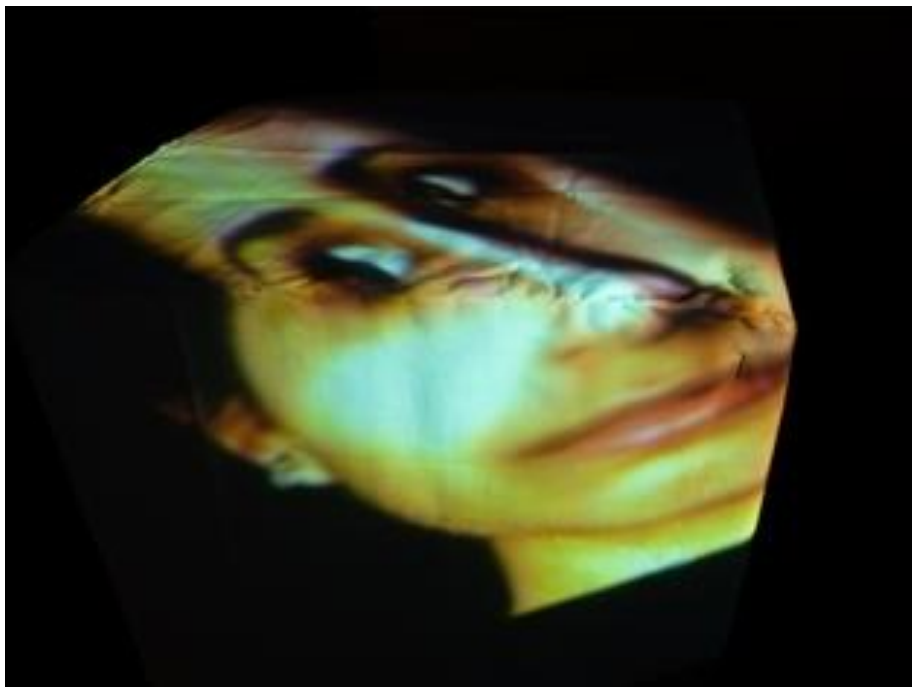


Figure 5.10 3D stretched face project on the Solo box (Photo: Helenna Ren)

In classical theatre and cinema settings, the audience is normally at the front and the screen is flat. Here, my installation boxes become performative in themselves, as fragmented screens, with images automatically changing throughout the different setting of boxes. Thus we experience the big eye, the small eye, unbalanced lips, the broken nose, the long nose, the cutting of ears and so on (Figure 5.10). Also, the solo box becomes more moveable in the performer's hands: she can wear it, hold it, and leave it on the floor next to her as if the box becomes part of her. She puts the box on her head, she turns, her face stretches, and her nose and her lips become distorted. When she takes the box off her head, you see two of her faces: the real face looking up, the projected face looking down (Figure 5.7); the real and the virtual develop a strong relationship that is already there, building a dialogue between and around.

During the performance, many elements in this scenario become screens; left wall, right wall, the performer's body, the floor. So the whole project presents a digital performance that interacts in real time and manipulates sounds and visuals to provide distorted kinetic images throughout the performance, and the project challenges the performer as well as the projectionist.

Video Projection and the Projectionist



Figure 5.11 the projectionist becomes the second performer. (Photo: Helenna Ren)

During the process of *BodyBox*, I became aware that the projectionist (figure 5.11) had become the second performer. With his body and in his use of the projector, there developed an embodiment. The cables he carried became his extended body; the projector he held made his body a more complex operational system throughout the performance.

During the show, the projectionist had to follow the performer's movements on the stage: carefully projecting her digitized body onto the left wall (fig. 5.4), closely projecting her feet on the installation boxes to represent the ten-year travelling, and precisely projecting her face on the solo box from different directions at different levels. When the performer had left the stage, the projectionist walked around the chair with the solo box still on it and the performer's face remaining on the solo box. How the performer's face appeared on the box depended on how it was projected. His gestures were simple by way of he held the projector up, front, down and on the floor.

How the face image goes on to the box is all managed by how the projectionist projects, until the distorted face is sitting on the chair on one side of the box, and the flat screen rests on the chair, with only moving eyes looking around in space. When he puts the projector down on the floor, all is stilled. He and his body are free.

BodyBox was essentially built around the interaction between a performer and video projections. This interaction fuses the digital and the live, blurring the boundaries of reality with the intention of generating a virtual self / selves, the notion of self and identity world. The technology is designed to complement the narrative and bring the audience into the world I have created for them. The piece required editing software to construct a video, which could be manipulated with Isadora and combined with the live performance to construct the final piece.

Performance and Technology

Isadora was always first choice software for me. It is a flexible media manipulation tool that provides interact control over digital video and sound. The programme was designed by Marc Coniglio who recognised as a pioneer in the interaction of live performance and interactive digital technology (Troikatronix 2013). With the performer in mind and programmed specifically to allow users to learn quickly without in depth knowledge. Named after dance

pioneer Isadora Duncan, Isadora is truly a programme for dancers and also is specifically designed for the manipulation of video (DeLahunta 2005: 32). The software enables the user to control video images by applying any number of effects such as reversing them or changing the speed, or even applying distorting video effects such as warping or flipping. Isadora is designed to not take the freedom away from the performance, as its flexible interface and its diverse range of effects, allow for the performer to create almost limitless varieties of image (Dixon 2007: 198). For my piece I opted to use a more extensive version of Isadora known as IsadoraCore, which is a multimedia application that allows users to manipulate digital video in real-time with more selected actors' lists, which offers even more options than the conventional programme.

The basic premise was to use a live feed camera to provide a virtual image for a live performer to interact with. The performer is then able to perform with her virtual self and the real self dance and at the same time in use of voice control image. It was the position of the performer in relation to the camera, which creates the scene rather than any software manipulation. The camera was connected to IsadoraCore, which allowed me to manipulate the feed and merge it with the video to create the piece.

In order to compliment the technological element, I focus on the performer's face to create the central character of the piece. The movement originated from the ideas of travelling along with emerging from the emotions and feelings related to the box and boxes. For instance: human movements, involving holding box sequences on head, up down, left shoulder, right shoulder, side right, side left, front knee down; and Avatar movements, focussing on facial expressions, using the twinkling and movement of eyes. The performer travels from stage left to right, each steps in sense of relation to the box in gestures of stillness, steps, walking, looking back, hand gestures, turning, jumping with mechanically distorted body parts, and facial expressions of curiosity, questioning, searching, fear, conflict, cherishing, and waiting. Stage is used as pace of distance from box, for dancing away from it, and for walking around it. The box is invested with feelings of longing, memories, sorrow and apartness. She wears the box, carries the box, stands up slowly, picks it up, wears it on her head, rotates clockwise, puts box on floor, so as at the end the stage is empty and only installation boxes and performer's face on solo Box remain. The soundscape is turned off and the pre-video of the

face on the box remains in silence. Audience at end will feel free to leave or stays as long as they desire.

To finalise this chapter, time is a well-used theme within digital performance. The connection between the timeless digital realm and the real world inevitably challenges the conventional ideas of time and space. The combination of live performers and digital software is, literally, the artistic articulation of everyday life. The world is barely real anymore, as our lives are increasingly dominated by technological enhancements such as mobile phones, televisions, computers, internets, which extend the body beyond its limits to communicate across oceans, witness the entire world from the living room and do a week's worth of shopping without leaving your bed.

The world in which we live is as much geographical as it is technological and the physical and the virtual cross over and intertwine digital art is the response to this existence, creating a theatre that drifts across both physical and virtual space. Digital performance has altered the ways in which audiences see the performer. The fixed nature of the performer is liberated from the bounds of the real as they fuse with the fluid, ungrounded virtual space. This performer is then free to explore and the audience are confronted with an image, which questions their understanding of the world. By integrating digital software and live performance, the aim with my piece is to challenge the audience to contemplate their own identity: what is real, who are we, who are we not, why are we here?

During this project I have found myself strangely connected with all the elements of life that I have tried to evaluate. Without even realising it, the piece became all about decision-making, much like I, as director, had to make decisions on the construction of the piece. Moreover I was conscious on how identity is constructed by others in a social context, and then deconstructed throughout digital performance worlds (Figure 5.12).

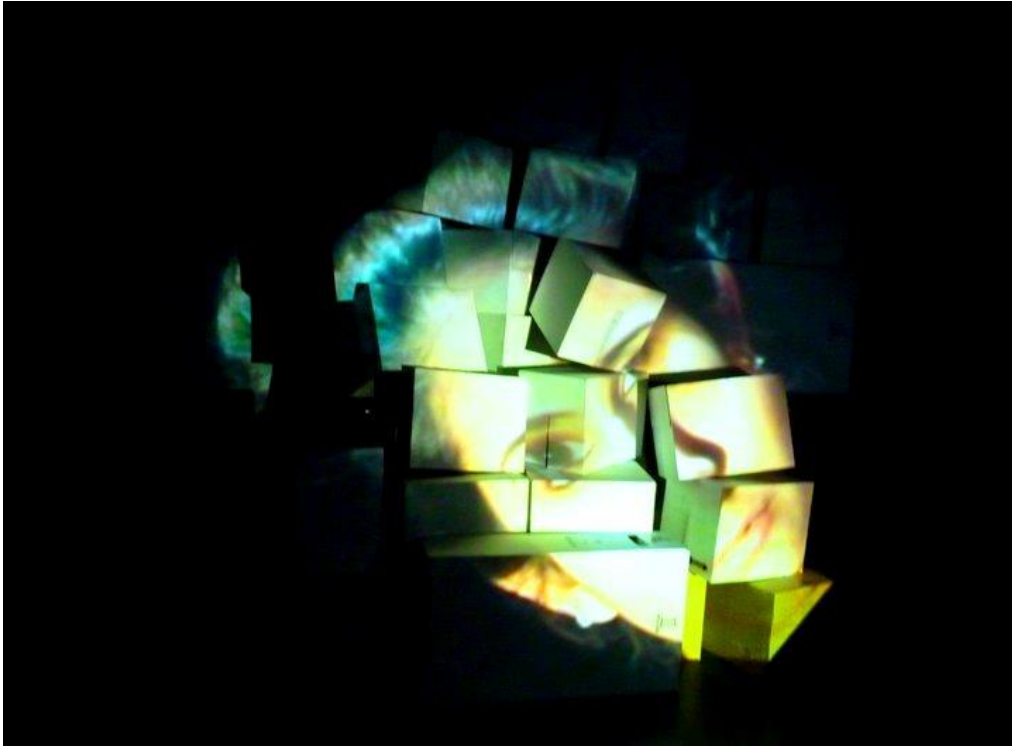


Figure 5.12 Distorted face / deconstructed identity on installation boxes. *BodyBox* (2011)

The goal of the piece was to utilise the unique opportunities presented by digital media to examine the notion of the self and identity.

For the audience, I hope to have created for them an immersive and interactive environmental experience offering them a new space to consider themselves and to look more intelligently at the world that surrounds them. People are constructed and can construct themselves.

Individuals grow, explore, develop and use their multiple identities for an effective being.

As a director I was able to employ the use of software to build some intricate scenes and to manage a live feed camera so as to examine performance in virtual and real spaces. If I had the opportunity to revisit the piece, I feel that I would work more closely with the projection on the box, from distance to close ups, and also with the sound element, in particular the vocal manipulation. In addition I think some aspects of the movement could be reworked and changed.

Conclusion

My objective in this thesis was to investigate and interrogate how representations of physical and virtual bodies inform identity construction and deconstruction in digital performance. The research framework comprises an analysis of identity theories and practices as well as case histories which detail my collaborations and my own projects.

Digital identity in performance practice can be read in the context of the history of performance. I have utilised historical frameworks to explore ways of conceptualizing cultural and critical approaches to identity in digital performance. In evaluating and contextualising my approach I reconsidered it in the context of my initial research questions.

Central to this analysis were my case histories particularly my own project *Body Box* (2011) performance. This project allowed me through the use of digital technology software to perform my own autobiographical expression of self. It challenged me to channel my story into the performer as a representation of me and for me to direct the performer as a virtual 'I', in this way the performer's self and myself both became illustrations of 'I'. The digital performance elements of the production required me to examine the concepts of staging, audience perception, performer direction and use of technology to enhance the expression of the show. As a result of this I learnt that digital performance is able to make the impossible become possible on a stage through the use of technological devices and software. These devices and software create the identity of the performance and performers to suit the director's requirements.

In my main argument, I explore the concept of fragmented digital bodies. I argue that a digital representation of a performer may constitute a recognizable representation of a 'whole' performer, as becomes apparent in the examples of 'double bodies' that Dixon writes about in his *Digital Performance* (2007: 241). However, in my opinion, a performer may also be represented partially or in a multiplicity of fragmented manners simultaneously. Considered from this perspective, the unified, whole digital double, featured in Dixon's examples, appears to be a somewhat troubling advocate of an essentialist concept of the human body with a fixed identity and always separate from other bodies.

My strategy in using digital technology is to represent identity through fragmented bodies that seek to challenge essentialist notions of the human body. Instead a more flexible perspective of the body is posed, one that allows for a multitude of accepted forms and behaviours to appear. I have discussed the humanist concept of an essentialist, demarcated human body and developed a perspective of autobiographical performance, which seeks to blur the boundaries between performance technology and the performer's body. I suggest a new approach to the spatial distribution of multiple identities that is based on a conceptualization of the effects of new media technologies.

Stelarc frequently uses his own body as his medium when performing:

A performance artist whose understanding of technology is always presented with an attentive (laser) eye to the gathering electronic crowd, Stelarc's art is often displaced into the safety of futurist rhetoric. But what is most futuristic about Stelarc is that his artistic imagination is a relentless, critical dissection of present regimes of bodily understanding. In the literal sense, we are living within the architecture of Stelarc's 'outered' mind: the 'absent bodies' of networked communication, the 'phantom bodies' of the image simulacrum, the 'hollowed out' bodies of global capitalism. Ours is the age of liquid Stelarc. (The Monograph 2005)

In the future, I intend to further develop my practical work to reflect my theorization. To further explore the spatial distribution of multiple identities, and to further develop my virtual identities to stretch the possibilities of the cyber world in which they inhabit.

The key importance of new media and internet networks, which is a central theme throughout this thesis, means that the attitude to performance technologies underpinning this work can also be applied to a wide range of multimedia forms. For example, Second Life (Virtual Identity) is a three dimensional virtual world where users can socialize, connect and create (Linden 2013). Stelarc has his own gallery where other artists worldwide can meet and rehearse their virtual theatres and present showcases (Second Life 2013). Anyone can do this likewise, and build a theatre or gallery for virtual meetings; users can create virtual representations of themselves, avatars which are able to interact with other physical or virtual objects.

David Trend observes in *Reading Digital Culture*:

In recent years the internet and other information technologies have transformed many fundamental parts of life, how we work, play, communicate and consume, and how we create knowledge, even how we understand politics and participate in public life.

(Trend 2001: 1)

Smart technologies exist in a world of ‘cyber bodies’, ‘cyber cities’, and ‘cyber cash’. It is difficult to make it through a day without encountering some form of technology, for example: computers, phones, or mobile technologies. The universality of computation, digital data storage, and telecommunications has made all of us profoundly dependent on computer networks, and developed a society that should now be labelled as a ‘digital culture’. This digital culture informs and educates us, stimulates us and allows us to interact with one another in virtual environments. In every one of these virtual environments sit design and art as central tenets. Every part of our digital culture has been designed, drawn and displayed either by an administrator or a participant, whether knowingly or not. In our digital culture we are all artists and we all create art. Art is all around us in our virtual world. We are all making a digital performance in how we display ourselves and represent ourselves in our online virtual identities.

In the future our virtual presence is only going to multiply and metamorphose into wider and more diverse spheres. The lines will blur between the self and the digital selves as human interactions become more governed by our representations within the virtual world. In this context digital performance can be practiced, collaborated on and viewed virtually, and yet still be performed by physical interactions as required. Developing wearable technologies will only further blur these concepts, as it will become harder to tell what is a physical performance or performer, and what virtual representation is. Google Glass (2013), Apple Watch (2014) and FitBit (2011) all point to where the next developments in internet connectivity lie, as the self can be monitored, controlled and embellished online and with prosthetic adjustment.

Mediation and invisibility have become defining characteristics of an age in which cyberspace has transformed much of our communication into a vaporous cloud of signal and

code, and same time identities are both constructed and deconstructed in our interfaced embodied physical and virtual worlds.

Modern digital artists have utilized the unique dimensions of digital media to examine the world around them. Digital performance realises a conflict between real and unreal, which other forms of performance cannot achieve. The integration of technology and liveness creates a unique sense of time and space where things beyond the ordinary are possible.

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Ukiyo (Moveable Worlds) 20009-2011

For The Time Being (Victory over the Sun) 2012-2013

BodyBox 2011

Full performance

At Brunel University for Research the Arts' 3rd Annual conference on 15th and 16th June 2011

Working in progress slide shows

Ukiyo (Moveable Worlds) 2009-2011

Full performance at Lilian Baylis Studio, Sadlers Wells, London 26th Nov 2010

Scene from Speaker Woman

Scene from Hammer Woman

Dressing rehearsal Speaker Woman

Dressing rehearsal Hammer Woman

For The Time Being (Victory over the Sun) 2012-2013

Full performance at Waterman's Theatre London 26th May 2012

Demonstration performance on 'Tatlin Tower' from ACT I

Kinetica Art Fair London 3rd March 2013

Characters on: Tatlin Tower stills, Sun Catcher stills, Stills from Kinetica

Redeveloped and performed again at Lilian Baylis Studio, Sadler's Wells London
3rd and 4th April 2014

For The Time Being (Victory over the Sun) 2014 Available on YouTube at:

<https://www.youtube.com/watch?v=NTcm-UFk0x8> (part one)

<https://www.youtube.com/watch?v=oXBW4oWyK0k> (part two)

