Analyzing Art, Culture, and Design in the Digital Age

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Chapter 5

Exploring the Liminal between the Virtual and the Real

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ABSTRACT

The creative application of digital technologies is accelerating as artists, designers and technologists continue to experiment and explore ways to create new aesthetic fields, semantically enhanced communication and innovative relations between people and machines. Our virtual worlds meet the real material world through the interdisciplinary research of computer scientists, digital media technologists, artists, designers and culture theorists. This chapter explores ways of bringing the virtual to the real through a range of differing conceptual positions and research approaches while demonstrating the creative interplay of variable media and online platforms for producing liminal works which cross the boundary between the analogue and the digital. The intent is to provide insights and examples of creative practice employing new technologies in innovative and unusual ways to generate exciting new work and offer new pathways for digital media research and development. The chapter presents relevant theoretical frameworks and examples of current practice in the area of digitally enabled transitional spaces for artists, theorists and curators, as well as researchers working both in the field and beyond to those working with new technologies, social media platforms, and digital/ material culture.

INTRODUCTION

In considering the dialogue between the virtual (digital) realm and the real world as a semantic space for creative exploration, there are many different approaches from researchers in adjacent fields concerned with new technologies and virtual platforms. I have been investigating this interstice between two worlds as a liminal space of transition and transformation for over 5 years now, and have convened 4 panels of specialists to present at ISEA – Inter-Society of the Electronic Arts (2 panels in Belfast UK and Istanbul, Turkey), CAA – US College Art Association, New York and in October 2014 at the UAAC – Universities Art Associations of Canada, Toronto. Papers from those panels were then published in edited volumes with IGI Global (Harrison, 2013), the most recent of these being ‘The Handbook of Research in Digital Media and Creative Technology’ due for publication in February 2015.

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The seven artist perspectives are given here as a series of synopses, they have been selected from those panelists and authors from the events mentioned above in that their work examples the broad range of activities currently underway in exploring the liminal. Beginning with Barbara Rauch and her e:Motion lab where she morphs animal and human facial expressions to explore recognition and our sense of self. Lorna Moore then follows with her work facilitating the deep engagement with ourselves by momentarily experiencing our 'other' now afforded by new technologies. Another artist, Alistair Payne, approaches an understanding of the Virtual through Deleuze which has expanded his practice as a painter into a multi-medial and interdisciplinary position. Where Payne's work has extended to include aspects of virtuality through incorporating digital video with his paintings in material installations. Ian Gwilt is exploring the transformation of digital code into material objects through 3D printing and rapid prototyping. Suzette Worden is interested in the microscopic unseen material world of 'meaningless matter' made visible by artists through nanotechnology and digital virtuality when engaging with the earth sciences. Maggie Parker works with the imaginary landscapes and virtual worlds of game scenarios, her work proposes that such environments should enhance their unreality by keeping an abstract aesthetic that does not simulate familiar earth landscapes and cities. The paper ends with a solely theoretical investigation of virtual and real spaces by digital artist Garfield Benjamin, who bravely navigates between Deleuze and Zizek (Lacan) to situate the subject/self.

7 SYNOPSES

Dr Barbara Rauch

Dr Rauch - runs the e_Motion research project which integrates 3D visualization, haptic technology and rapid prototyping as a window into the Autism Spectrum Disorders (ASD) mind. Through the groundbreaking researchers such as Simon Baron-Cohen (Baron-Cohen, 1985) we have learned that ASD falls along a broad spectrum, and high-functioning autistics like Temple Grandin have taught us that they are handicapped not by their ASD, but by the fact that they learn in different ways from 'neurotypicals'. It is now well known that many ASD people are visual thinkers and learners, and this project utilizes state-of-the-art but 'approachable' digital technologies that will allow the autistic person to speak with distinct and enhanced visual voices. This differs from art therapy in that it will lead to a better understanding of how ASD individuals think and feel, through visualization.

Dr. Rauch joins collaborators Dr. Stuart Shanker and Prof. Jason Nolan, to work on studies in ASD, emotion, education and communication. The project is still in its early stages of production, however it has initiated the outlines and hypothesis of a promising cross-disciplinary study that also introduces a PLAY method for emotion rehearsals. On using the interface a productive buffer zone will be created to test out approaches, responses, anxieties and reflections in the difficult task of reading emotions in another person's face. Using Paul Ekman's understanding of universal emotions, (Ekman, 2013) expressions of the face can be read across cultures. His classification of basic emotions into a list of six distinct expressions (anger, disgust, fear, happiness, sadness, and surprise) was later extended to include guilt, contempt, shame and others. Rauch added contempt to the original six basic expressions and to select distinct facial images of the human face that demonstrated happy, sad, disgusted, afraid etc. Furthermore being interested in the evolutionary aspect of emotions, not unlike Darwin's interrogation of expressions of emotions in animal and man, a fox's neural expression was included in the image database for morph-

Figure 1. Barbara Rauch Goethe dreaming of Schiller. Paper. 2013.

ing. This model will now be used in a study to test facial expressions and mimicry in the autistic person but has also led to Rauch's creative works that include 'emotional degrees' (animation), 'interFaced' (sculptures), and 'friends' (hybrid digital representations of merged faces).

Dr Lorna Moore

Dr Moore is a video performance artist placing her practice at the interstice between the real and the virtual. She is interested in what happens to our perception of self when we move across the boundary between the corporeal self and the live digital image as other, and argues that her work draws the performer/participant through the video frame where both participants are immersed in each other. Both performers are suspended in the belief that the live digital image of the other performer is a part of their own corporeality. The work involves two participants wearing a Head Mounted Display System linked to a live video feed. Each performer's live video feed is swapped over via a real-time video programme so each participant sees through the eyes of the other performer. The aim of the work was to perceptually swap the bodies of two performers to bridge the gap between the performer and the performed, subject and object.

Moore presents personal accounts of users' experiences engaging with her headsets which she declares is an inter-corporeal experience. She then explains this phenomenon through the lens of psychoanalyst, Jacques Lacan and his work on the 'Mirror Stage' (Lacan, 1973), phenomenologist Maurice Merleau-

Ponty and his writings on the Chiasm (Merleau-Ponty, 1968), and anthropologist Rane Willerslev's research on mimesis (Willerslev, 2007). These positions provide new insights into the relationship between the corporeal Self and the digital Other providing platforms to account for the blurred boundaries between these modalities. She is intrigued by the way the material body is stretched across these divisions highlighting the way digital media acts as catalyst in this in[bodied] experience of be[ing] in the world. Moore states that the purpose of her work is to provide alternative ways of thinking about the body and its relationship to video performance to understand the way digital media is having an impact on our perception of a single bounded self and how various selves can be shared through innovative ways of using technology. Her piece In[bodi]mental presents an alternative viewpoint of the self/other divisions and positions these modalities as a shared experience.

The findings from her work has seen the emergence of an augmented self which phenomenologically stretches the materiality of the lived body beyond the parameters of a single self were we share an intercorporeal experience. Moreover we see the way the digital body and the actual feed into each other via the real-time video technology. Her work focuses on be[ing] rather than becoming and looks to find new ways to immerse the viewer/participant within the artwork. An exploration into real-time video technol-

Figure 2. Lorna Moore In[bodi]mental, The Public, West Bromwich, UK. 2011.

ogy is demonstrating that we can experience an overlap between subjects were the binary oppositions between self and other are no longer clear cut divisions but are now emerging as blurred modalities of be[ing] in the world. Moore's findings have revealed that when we interact with our real-time video image we do experience a merger between the body and the real-time video image (see figure 2). This is most powerful when there is a disruption in the proprioception of the body through the immersive experience, accompanied by a feeling of the uncanny. She argues that when we experience the uncanny we are somewhat closer to an unfamiliar part of self we have rekindled during the performance – a hyperreal experience of self-discovered through the other via the technology. For a moment, an uncanny nanosecond of time, we now how it feels to be someone else, we can reach out, cross the divide, and touch our virtual 'other'.

Dr Alistair Payne

Dr Payne explores understandings of the virtual within his practice as a painter which has enabled him to move his work into new areas of expansion. In effect his investigation into Gilles Deleuze's notion of 'the virtual' instigates an interdisciplinary approach towards painting where *external* connections and relationships are introduced and developed. This equates to the opposite position of the internal critique of medium particularity or specificity and will radically alter the way in which painting can be created and consequently thought. Research into the 'virtual' and interdisciplinary practice driven from concerns within painting, effectively constitutes a new methodological model for thinking through the space of painting. In contrast to prior methodological models used, primarily within the critique (or theorisation) of painting, an investigation into Deleuze's methodological processes creates a more open position within which to redefine the limits or constraints of painting. The virtual therefore acts as an instigator for change, which effectively destabilises the pre-formity attached to medium specific practices. It is for this reason that The virtual forces external relationships and connections to come to the fore in order to radically alter and transform the physical and conceptual constructs of different disciplines, and provides a model for thinking through interdisciplinarity within, and from, other media. Alongside this understanding of the virtual and its direct affects upon artistic practices, is how it encounters the hybrid and metamorphosis as key elements of change.

This method for actualising change is based upon an examination of the notion of the virtual / actual according to Henri Bergson and Deleuze (1991). The virtual is bound into the process of becoming, but not a becoming through a systematic (or concrete) dialectical method, this is an open-ended becoming, where the virtual can be seen as series of potential. Deleuzian philosophy (Deleuze, 2001) is based within the virtual; it is the virtual that constructs the actual and the actual that is defined by its virtual intensities. These virtual intensities are the becoming actual of the virtual and this is not used as a way of defining the actual in the sense that it will subsequently have its own identity but rather it is a method for opening the actual to continual and further virtualities. Deleuze's notion of the virtual allows for a 'spacing', a slippage or the 'bringing forth' of potential within painting as a formless condition. The development of this methodology situates painting as a virtual element, an element which itself contains the potential for change within the work through integration and transformation. The virtual can be used as a way of re-thinking or re-negotiating the space of theory within which the practice can be actualised. It necessarily incorporates interdisciplinarity by forcing connections and proposing ways of re-structuring new, transformative and different dynamic forms of practice. Including the digital and cyberspace.

Figure 3. Alistair Payne Lost Angels (Film still), looped DVD, 9 mins 28 sec. 2010.

Prof Ian Gwilt

Dr Gwilt, in his investigation into Digital data and material objects, explores how the creation of physical artifacts based on data extracted from computer generated virtual spaces can change the way we read, interpret and respond to digital information. In an era where the visualization of complex digital information is increasingly being used to shape our social, political and economic environments, Gwilt examines what happens when you use big data to drive the parameters and form of a physical object. By asking the question why should we consider translating digital data into a physical form, and what happens to how we understand, respond and relate to digital information when it is presented in this way, he considers whether or not data driven objects are simply a novel visualization technique or a useful tool that can be used to add insight and accessibly to the complex language of digital big data sets. He understands the new constructs of digital data as concretized into physical form, remediated from information sources such as, mobile phone coverage records, crime statistics and temperature patterns. These tangible translations change our relationship to screen-based content, and seek to reveal how by encoding digital information into a physical object we can establish a different way of reading data through spatial, temporal and material variations that sit outside of the computer-monitor and the

Exploring the Liminal between the Virtual and the Real

digital environment. The making strategies for these digitally informed objects such as rapid prototyping techniques help us to gain insight into a set of new ‘data objects’ that draw from the visual language of the computer and are ‘made real’ in physical space.

As computing technologies become more located and related to place and social contexts the potential for the digital to augment and interact with material culture become more opportune. In terms of information visualisation this closer relationship drives the desire for data visualisations that speak to both our real-world and digital connections. The materialisation of digital data is facilitated by the development of a number of new manufacturing technologies such as computer controlled laser cutting, 3D printing and rapid prototyping techniques which allow for the translation of digital data back into physical forms. Gwilt has examined a number of various materialised objects created by artists/sculptors and designers, and also creates pieces himself. His findings indicate that the data driven object needs to be considered in light of the existing issues and conversations which are already taking place in the discipline of information visualisation. These dialogic objects have the ability to capitalize on the inherent traits found in both digital and material culture to communicate their message. By combining these attributes into a hybridised form a new way of looking at the digital/material relationship and how we can communicate through it will hopefully emerge. Gwilt looks at the different ways in which we interact

Figure 4. Ian Gwilt – Trophy (showing LOM fabrication process detail) Artist: Brit Bunkley. 2006.

with objects using touch and our other senses, and consider what these types of embodied interaction might mean in terms of how we comprehend any underlying data and information. He is particularly adept at articulating digital material hybridity, distributed technologies, communities of use, and the implications for how we receive, understand and consume big data.

Prof Suzette Worden

Dr Worden's work concerns the often invisible materiality of rocks and minerals, and virtual space, where artists engage with the earth sciences as a source of inspiration and as a provider of data about the natural environment (see figure 5). This rich source of data may arise from: the conditions of the atmosphere, to physical formations; from small scale to gigantic formations; extremes of heat and cold; and the interaction of all these in time and space. Additionally, the models, visualisations and explanations of these phenomena by scientists can include aesthetic characteristics that are appreciated by a wider audience than immediate scientific peers. When we are concerned with digital environments, the discussion is most often centred on visualisation, which includes reference to objects with a material or physical existence and also to mental constructs. These constructs and models can be directly observable or become visible through an instrument or device. Visual characteristics can also be translated from a

Figure 5. Suzette Worden – zero@wavefunction, Singapore. Artist: Victoria Vesna in collaboration with nanoscientist James Gimzewski. 2002.

non-visual state into constructed data, as a ‘conceptual’ translation. With digital environments becoming so central to everyday life there is often slippage between the values attributed to analogue and virtual spaces. This can happen where there is slippage between the virtual and the real, or symbol and matter; where there is a reversal of values. As Bruno Latour (2008) has noted: “How did we succeed in having the whole of philosophy reduced to a choice between two meaninglessnesses: the real but meaningless matter and the meaningful but unreal symbol?”

In many cases of creative work, this slippage or reversal is intentional and becomes, for the viewer, an intriguing and rewarding aesthetic and emotional experience. Using examples related to the earth sciences, Worden investigates the ways in which creative works demonstrate the movement of ideas and concepts to and from the physical to the digital. She asserts that artists who engage with the earth sciences have been able to explore all kinds of information about the natural environment, including information about the atmosphere, extremes of physical formations across immense dimensions of time and space, and increasingly ‘invisible’ realms of materials at the nanoscale. This is a rich area for identifying the relationship between digital and material cultures as many artists working with this subject are crossing boundaries and testing out the liminal spaces between the virtual and the real. Not only is this a rich area for current experimentation but often these artists offer a critique of historical formations or provide a critique of theoretical concepts. Many of the works chosen for examining their interest in the field of earth sciences also demonstrate a strong sense of awareness of the importance of a ‘sense of place’ that refers to the values associated with cultural memory and the construction of heritage. This makes the resulting slippage culturally rich and suggests that interpretation must also include consideration of the construction of ‘texts’ and whether authorship is intentional or the result of audience participation. She is interested in distinctions between what is presented in an artefact, and what might be constructed by the audience, and examples creative works that take us from the digital to the physical where they make specific reference to geology, studies of rock formations and technologies supporting mining activities and resource industries. Worden has a particular investment in the paradox of invisibility within ‘real’ physical worlds as against the revealing and transformational potential of narrative within digital spaces will be highlighted for its creative potential.

Dr Maggie Parker

Dr Parker is a fine artist undertaking an investigation into the virtual worlds of computer game design, and classifies ‘haute games’ as aesthetically driven in that they are formulated to identify virtual environments creating unique, alternative ‘blendings’ with participant-players and assemble a framework for developers to pursue, when producing original computer game genres (see Figure 6). She sees a real need to inform both the practice and theory of Game Studies with an artistic aesthetic and an understanding of the impact of gaming on the psychological and emotional states of players or participants. Parker understands creative practice as a non-verbal experience that involves a different kind of thinking and considers that, by engaging in play, access to emotional and cognitive experience is enabled. She argues that virtual space, as a medium, is both powerful and engaging; a ‘meaningful space’. Haute games set up situations to evoke emotional responses from viewers, relating philosophy and theories, utilising and facilitating personal intuition and rigorous perception to create pieces of work.

In querying why we have to complete tasks in every game, Parker suggests that there is room for alternative game interaction that generates cognitive possibilities, to provide alternative and beneficial outcomes for players. Her more recent work is focused on an application for mobile phone and tablet

Figure 6. Maggie Parker Star World. 2005.

technology, her *Digital Book of the Dead* being a contemporary version of the Egyptian Book of the Dead. Parker's version brings interactivity enabled by game technology plus integrated augmented reality technology into a museum setting, to enable knowledge of other cultural concepts to be disseminated within Museum, classroom and community areas. However an earlier piece 'Star World' better demonstrates the potential of using software as both an artistic interpretation and an alternative method of game-design. The Star World's environment contains wholly imaginary, aesthetic elements to experiment with alternative texturing. It became a virtual-environmental empirical test-bed, as well as an art piece, based on personal interaction and engagement. Parker considers that this double functionality is a function that game studies scholars and computer-game designers should take into consideration, in the future. She sees that computer games provide a unique opportunity to experience intangible fantasies and create engagement with emotions which are able to be played out in real-life. Participants in her Star World identified in various ways the hexagon objects placed in the environment, naming them as hexagons, birds, geese, space ships, fifty-pence pieces and others. In total the hexagons have so far had 29 differing descriptions.

Dr Garfield Benjamin

Dr Benjamin is a researcher who considers the subject as the 'gap' between virtual and real states. Digital media has called into question the appearance of 'reality', forcing all theories of contemporary culture to take into account the possibility of other spaces with which the (physical) human subject can engage.

Within the many varied, and often incongruous, theories of digital technology and its culture there are two strands of the discussion that have emerged in which the very terms of the field are challenged. These are centred on the problematic notion of ‘virtual reality’ that has dominated cultural depictions of the digital world, usually taking either ‘virtual’ or ‘real’ in an expanded definition to draw out a deeper understanding of the fundamental differences, connections and interdependency between physical and digital spaces. Digital media has called into question the appearance of ‘reality’, forcing all theories of contemporary culture to take into account the possibility of other spaces with which the (physical) human subject can engage. There is a need to expand and intersect current discussions of the relation between virtual and real by exploring the antagonisms that arise through developing both sides of the term. Benjamin readdresses the term ‘virtual reality’ in the context of ongoing debates in philosophy, technology and creative practice in a discussion of subjectivity in contemporary digital society, to insist on a constant re-evaluation of the terms used in such a discussion and their ramifications for its application in digital media and creative technologies. He redefines the term ‘real’ along Lacanian lines (Lacan, 1977), particularly as applied to cultural phenomena by Žižek (Zizek, 2009), he then includes writers such as Gunkel (Gunkel 2010) who have furthered this notion, drawing out the real across physical and digital worlds as the hidden causality (for example, quantum wave functions, DNA or bits of computer code) that underpins the appearance of objective reality. This real is inaccessible and terrifying, embedded within the psychoanalytical construct of contemporary subjectivity. Counter to this development is the more common expansion of the term ‘virtual’, often taking into account the definition developed by Gilles Deleuze (Deleuze, 1969) as a surface that is not actual but with which the subject can engage. This has been applied to digital media as an alternative to the conflation of ‘virtual’ as ‘digital’, as is implied in the labels ‘virtual reality’ or ‘virtual worlds’, to instead connect the fluidity of digital surfaces to consciousness in a relation consistent with other generative effects within the structures that form the idealist element in Deleuzian philosophy.

To form a critical overview of past and current discussions of virtual reality in the field of digital media, suggesting innovative modes of interrogating the creative potentialities of digital media, he references cultural artefacts that embrace an expanded view of the digital or confront the transition between physical and digital modes of ‘virtual reality’, including digital art works, computer games and avatar-mediated spaces. This research will then offer a new definition of virtual reality, a challenge to established modes of thinking digital media, and a call for a constant re-thinking of the terms with which we construct our engagement with digital technologies within our subjective position between ever more permeated virtual realities.

CONCLUSION

The ways of exploring the liminal space existing between virtual and real states are numerous, diverse and highly creative. For this chapter seven approaches from the art world have been collated from four panels convened by the author with papers then published in edited volumes with the intent of interrogating the transition from the real to the virtual where the interface is understood as a transformative space of creative transcendence. Social media and digital technology is reconfiguring our relationship with the world and is also affecting how artists make their work and relate with their public. Now technologies can help to position art into the everyday of people’s lives and activities, outside the gallery space. Digitally enabled new spaces have opened up where artists can engage with audiences in a participatory

experience. Digital media provides virtual platforms where accessing them means stepping from one world to the other, a conceptual moving from one state of being to another. Contra to human-to-avatar experience, virtual objects are transformed into a solid materiality by crossing this threshold. The threshold is then a magic alchemical space, an interstice between the real and the virtual, a moment of change, of becoming other. The examples given in this chapter go some way to articulating an overview of the creative approaches to this ongoing exploration of the interstice between worlds.

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