Upgrading Ekphrasis:
Representations of Digital Space and Virtual Worlds in Contemporary Literature

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Submitted for the award of PhD

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January 2015

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ABSTRACT

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This thesis will address the concept of ekphrasis from a new perspective: in the context of digital graphics. The focus of this thesis will lie in textual representations of computer-generated immersive and interactive graphical environments, or 'virtual worlds'. This thesis will put forward an ekphrasis that is spurred by an emotional experience of a visual artwork that has a significant spatial aspect. It will be suggested that the viewer/user of such an artwork does not simply gaze from outside, but is incorporated into the digital artwork as an active participant through the immersive and interactive elements. Such a multisensory experience of an artwork has several effects on the dynamic between the viewer/user and the artwork, and, subsequently, also on the process of transmitting that experience to the readers via textual ekphrasis. Further, it will be seen that although digital technology has become commonplace, attitudes towards the virtual remain suspicious. In its discussion, this thesis will focus on three key texts: William Gibson's *Neuromancer* (1984), Neal Stephenson's *Snow Crash* (1992) and Charles Stross's *Halting State* (2008). Finally, this thesis will put forward a proposal for the operation of 'virtual' ekphrasis through five interrelated principles: metaphor, separation, interface, participation and sharing.

Introduction

In 1955, Leo Spitzer used the term 'ekphrasis', known from Classical literature, to denote a poetic verbal description of a work of visual art. His paper found a place in the already existing scholarly discourse concerning the relationship between word and image. It originated a chain of academic debate, which has continued until this day. A rising interest in the term has been evident in a number of essays and monographs published in the past thirty years, as discussed in Chapter 1. A striking feature of the discourse on ekphrasis is the elusiveness of a commonly accepted definition of the term. Major scholars, such as Murray Krieger, W.J.T. Mitchell and James Heffernan have all proposed different interpretations. While the definition of ekphrasis put forward by Heffernan (1993: 3), 'a verbal representation of a visual representation', seems to have achieved a wider popularity, it is by no means a comprehensive definition. Recently, Classical scholar Ruth Webb has argued that the modern emphasis on the visual artwork is misguided and that original Classical definition referred to any visual scene vividly and emotionally described in words.

The difficulty in reaching an agreed definition of ekphrasis has had two notable effects. Firstly, it means that dissemination, particularly to non-experts on ekphrasis, is made more difficult. New scholarly works on ekphrasis cannot rely on the audience to understand the concept well, as ekphrasis tends to be little known outside the expertises of poetry and visual and textual studies. In order to discuss ekphrasis in a way that can reach wider academic audiences, new works must review previous scholarship to a greater detail than usual, in order to ensure that the contested definition is presented in as clear terms as possible. This restriction leads to the second point. Due to the lack of a common definition and the resulting necessity to return over and over again to the previous scholarship, ekphrasis is not applied in analysis as much as it likely could be. Further, its theoretical considerations have not yet been fully developed in context of the recent developments of contemporary visual culture, an increasing portion of which is produced and consumed by digital means.

This thesis will address the concept of ekphrasis from a new angle. In order to advance the concept another step in its considerable historical chain, which reaches, in different guises, from ancient Greece to the present day, this thesis proposes a consideration of ekphrasis in the context of digital graphics. The specific focus will lie in textual representations of computer-generated immersive and interactive graphical environments. This thesis will put forward an ekphrasis that is spurred by the actual or notional experience of a visual artwork with a significant spatial aspect: the viewer of such an artwork does not simply gaze from outside, but is incorporated into the artwork as an active participant through the immersive and interactive elements. It will be suggested that such an experience of an artwork has several effects on the dynamic between the viewer and the artwork and, subsequently, on the process of transmitting that experience to the readers via ekphrasis.

Rationale

The growth of interest in ekphrasis over the past decades coincides with a general increase of visuality in society. Jay Bolter (1996, 2001) has discussed the growing dominance of space by images in favour of text in newspapers, magazines and other media. This process, identified by him in the second half of the 1990s, has subsequently sped up even further with the advent and rapid expansion of digital media. Bolter has observed that the visuality of the new media informs the change towards greater visuality in the 'old' media, which is struggling to compete with the digital. Even earlier, shortly after the internet had first become available to the general public, Mitchell (1994) coined the concept of a 'pictorial turn', a new interest in the visual in the public culture and in academic discourse. Central to the concept was the notion that spectatorship could be as important and as complex a matter as reading. An image does not stand alone, but its meaning is intrinsically connected to its medium, related institutions, existing discourse, the notion of the body and general attitudes concerning representation. Mitchell writes:

> [W]e still do not know exactly what pictures are, what their relation to language is, how they operate on observers and on the world, how their history is to be understood, and what is to be done with or about them. (1994: 13)

He notes that attitudes to the visual mix fascination with unease, or an outright fear. A large part of his suggestion on the pictorial turn was based on the non-digital mass media of the time, but, in his discussion, he already considers 'cybernetic' technology.

Mitchell notes that the new technology has created new forms of visuality with significant power upon the spectator. The power of the digital image lies in its emergence as a symbol of progress. The interfaces of digital technology began as very simple ASCII text, but as technology developed further, graphical representations, and, eventually, graphical interfaces, arrived as carefully marketed signifiers of the latest and the best performance in computing. In the late 1990s, downloading a picture on a slow dial-up connection took considerably longer than today, when images even on very complex websites appear near-instantaneously, thanks to high-speed connections and more powerful hardware. Gaming consoles, PC games and massively multiplayer online role-playing games compete with the complexity of their graphics and special effects more than with any concrete differences in gameplay. After a lull of about twenty years in any interest in virtual reality, games companies have, in the past couple of years, revived this interest with devices such as Oculus Rift, which seeks to turn the ordinary gaming space into a 360-degree virtual space by means of headphones and a headset covering the player's eyes. The 1990s enthusiasm for virtual worlds transformed at the end of the decade, as 'open' worlds were surpassed in popularity by plot- and set task-dominated 'massively multiplayer' online (MMO) games. The latter have grown to comprise a massive industry of considerable business power in terms of marketing and sales, with a wide range of related products.

Outside games industry, Google have announced a new device called Glass, a light headset that looks like a set of spectacles. Glass is receiving a great deal of publicity both for and against it, due to its suggested implications for privacy by the ability to take photos and record videos at the blink of an eye. Although the possibility to send instant communication by means of text, without the knowledge of the object of the communication, has been available by means of SMS and subsequently by instant messaging for almost two decades, it is the possibility of sharing images of the object that is causing alarm. An image is considered more intimate, more private and more powerful than a textual description of the object of the image. The issue of sharing and publishing images is relevant in context of

social media, which has also experienced a considerable increase in the use of images in the past decade. The trend has moved from the early textual blogging communities such as LiveJournal towards 'microblogging' on Twitter, the updates on which are restricted to 140 characters. Facebook tends towards short updates, photos, image-heavy 'memes' and videos. Social networks that are fully focused on images, such as Tumblr, Pinterest, and Instagram, have also appeared recently, while the photo messaging mobile application called Snapchat has become popular. Social media and mobile applications mean that the visuality of digital media is constantly available. No longer restricted to bulky desktops, which may have been only accessible at workplaces or at schools, the near-constant stream of images is enabled by mobile technology such as smartphones and tablets.

Contrary to what might be expected, study of the relationship between the visual and the textual has been very slow to address the effects of the new digital media on this field. Academic humanistic interest in information technology and its implications on the cultural, psychological, sociological, and literary studies, grew in the late 1980s and the 1990s, but in the first decade of the 21st century the interest waned. In the recent years, the emergence of what has begun to be called 'Digital Humanities' has rekindled the interest in the digital media from the perspective of the Humanities in general, as their various disciplines feel threatened under the apparent societal and economic preferential emphasis on the scientific and business-oriented fields. Interest in the new forms of literature and in the new themes and topics present in 'old' forms of literature has been very slow to kindle. N. Katherine Hayles and Marie-Laure Ryan are among the few who responded to the arrival of digital media early on and have continued to write about it in literary context from theoretical perspectives. In the September 2011 issue of the *CLCWeb*, Werner Wolf issued a specific call for embracing mediality and intermediality in the study of literature, while remaining aware that Comparative Literature ought not to turn into media or cultural studies. Literature, Wolf suggests, can function as an interface for all other media.

This thesis is one of the first comprehensive studies of print literature and the digital visual. An active community on electronic/digital literature researches and discusses visual and textual works generated by computer, and 'read', or otherwise experienced, by means of a computer, but little work has been done concerning digital technology, and specifically

digital visual, as a new topic in contemporary fiction. We may speculate on the reasons behind the reluctance of literary studies to engage with questions relating to new technology. Firstly, studies on comics and graphic novels suggest that at least part of the anglophone prejudice against serial graphic narratives is connected to the attitude that image-based narratives are easier to comprehend than text-based ones. Therefore they are thought to be more suitable for those with limited reading ability, such as young children. Even outside narrative texts, images are seen as best suited for situations that lack understanding of a text, such as signs intended for comprehension of everyone regardless of whether they speak the dominant language or not. Thus, an image comes to stand for something inferior to text in a Darwinistic hierarchy: as higher understanding evolves, more and more complex texts become understandable. The concept of the 'pictorial turn' suggested by Mitchell, with its argument for spectatorship as a complex phenomenon, functions as a counter-argument to the simplistic view of the image. Nonetheless, the attitude persists. It may be that the increasing visuality of the digital media is seen as a step backward: a 'dumbing down' of the mainstream media in general. Consequently, the digital visual may have ended up occupying a spot next to comics and graphic novels in the unspoken classification of topics 'worthy' and 'unworthy' of study.

Secondly, in a related issue, most representations of digital technology in literature have, up until very recently, taken place in science fiction. Due to its formulaicness, 'genre fiction', such as SF, fantasy and romance, is generally perceived as having lower literary value. As such, it tends to not be considered in literary studies outside the area of Popular Literature. Genre fiction is also strongly associated with qualities such as escapism and immersion in the fictional world, which, as Janet Murray (1997) and Ryan (2001) have demonstrated, are seen as strongly negative concepts in academic discourse. The kind of digital technology represented in literature has largely consisted of immersive virtual worlds. As MMOs such as *World of Warcraft* have become part of mainstream entertainment, concerns have been expressed about the addictiveness of online games. The stereotype is that the immersiveness of such games blurs the borders between the real and the imaginary, making the players less able to comprehend the consequences of their deeds in the real world. Even if a direct link between games and real-world violence is not made, the perpetrator of violent crimes is often described as a loner who spent time playing games. The implication

made in such cases is that game-playing is a solitary activity, which leads to abnormal refraining from 'normal' human contacts. The suggested association between the immersive visual and violence is one of the latest examples of the difficulty and fear felt over image.

Thirdly, the ability to analyse and discuss representations of the digital in literature requires a certain amount of background familiarity with the digital. Even in 2014, digital media remains a new area of information and entertainment, and an even newer area of study. The first people to experience any kind of digital media as an ordinary part of their everyday lives were in their teens in the late 1990s. It took another decade until most homes had broadband internet connections, and only in the last decade has the internet become the primary source of news, music, films, games and communication. For many, digital media still appears intimidating and challenging. Digital culture and its applications have been a small-scale interest until recently. Equally, topics of visual and textual studies such as ekphrasis do not have a very large expert base, in comparison with many other areas of literary study. Further, the speed in the development of digital media over the past ten-fifteen years has been such that it can be difficult to gain a substantial amount of familiarity in a particular topic before it has already radically altered.

Lastly, we must return to the issue of the elusiveness of the definition of ekphrasis. As long as defining a concept fully presents a problem, it is difficult to develop that concept further. Yet, recent precedents for applying ekphrasis in innovative ways have been published. Siglind Bruhn (2001) discusses ekphrasis in the context of music and Laura M. Sager Eidt (2008) has explored ekphrasis and cinema. The consideration of digital media would seem like a logical next step. So far, only Cecilia Lindhe (2010) has contributed to the discourse on ekphrasis in relation to digital graphics. As mentioned earlier, her focus lies largely on the digital material itself in the form of electronic literature, which means that the phenomenon of the digital visual represented in print text still goes mostly unaddressed. It is this gap in scholarship that this thesis intends to address.

Research questions

This thesis proposes a new kind of ekphrasis, textual representation of immersive digital graphics, specifically virtual environments or 'worlds'. Any discussion on a new application of an existing concept must begin with the question whether or not that new application is viable. Therefore, the first research question to be posed by this thesis must be whether representations of virtual environments in print literature can be called ekphrastic in the first place. In contemporary literary studies, ekphrasis is a concept strongly associated with poetry and poetic language, whereas representations of virtual worlds tend to occur in prose fiction. Moreover, science fiction, the vehicle of most textual representations of virtual worlds, has typically tended to steer away from poetic effects, in favour of a focus on plot, rather than on language. If ekphrasis can be identified in such texts, the follow-up question must be how it is defined, and in what way it stands apart from non-ekphrastic passages.

Further, this thesis suggests that an essential feature of digital graphical environments is their illusion of space. As a user logs on and 'enters' the virtual environment, he/she becomes part of that environment, and, consequently, part of the artwork. Such an experience is in clear contrast with the traditional notion of ekphrasis, which assumes that the viewer gazes upon on the object from outside, keeping his (more often than her) distance. A fundamental research question in relation to virtual ekphrasis is what happens to ekphrasis when it needs to incorporate spatial elements? This question is related to the first set of the questions listed above, as representing a spatial visual by means of words may potentially make it difficult to distinguish between ekphrasis and non-ekphrastic text. A key issue, once more, is the need to formulate a sufficiently clear definition for such ekphrasis, along with clear parameters for it to stand out from the rest of the text.

The third research question considers the dynamic between the viewer and the image (and, by extension, reader), which is a core element in ekphrasis, as interpreted by recent scholars such as Heffernan. The question on the relationship between the viewer and the object/image relates back to the dualistic attitude of fascination and fear, discussed by Mitchell, but the history of which extends at least as far back as G.E. Lessing's work in the 18th century. The encounter between the viewer and the artwork takes place at a distance,

typically at an institution such as a gallery. The viewer is so impressed by the encounter that (usually) he translates his feeling of appreciation of the artist's skill and his own 'enlivening' of the static object into movement and life by means of words. Heffernan has suggested that the process reflects a gendered power struggle between the active male viewer and the passive feminized object of his gaze. This thesis hypothesizes that in the case of virtual ekphrasis, due to its spatial aspect, the dynamic between the viewer and the artwork must be different, potentially more cooperative.

The fourth research question takes all the aspects of virtual ekphrasis listed above and asks what virtual ekphrasis can contribute to the overall discourse on ekphrasis. As noted, scholarship on ekphrasis tends to be fragmentary and repetitive due to the variety of definitions and interpretations used. Is it then worthwhile, to identify yet another aspect of ekphrasis, potentially fragmenting it even further? Is it useful to offer yet another potential definition of ekphrasis?

The fifth and final research question concerns the literary interpretation of the texts discussed in this thesis. The traditional interpretation of ekphrasis assumes that the visual artwork creates such an impression in the writer that the writer feels he must express it in words. If we assume that the visuals represented in ekphrasis are significant, we must ask what is it, exactly, that makes them significant. What do the representations of virtual worlds examined in this thesis tell us about attitudes towards the digital, and specifically the digital visual, in the past thirty years? If we assume that unfamiliar is less comfortable than familiar, we may hypothesize that the attitudes towards the digital visual may have changed, from wary to more comfortable, as technology as developed and become commonplace.

Approach and methodology

The fundamental approach of this thesis is comparative: the principle that various forms of the arts can be seen as having interconnected relationships and that they can be discussed together. We can compare not only different literary texts, but, also, as in this thesis, literary texts and visual images. Further, the comparative approach assumes that in this process, theory has an important role. A strong theoretical framework enables us to draw valid comparisons between individual texts and other works. The term 'Comparative Literature' has traditionally indicated comparative analyses between works from different linguistic areas, ideally studied in the original languages, rather than through translation. A more recent approach applies the framework of Comparative Literature to studies of literary texts from different cultural areas or to texts relating to other arts or to other disciplines entirely, regardless of the original language. This thesis will discuss two North American texts and one British work in connection with the concepts of the image and representation, drawing a lot of material from new media in general and from games in particular.

The main purpose of this thesis is to develop further the concept of ekphrasis. Hence, the history and various interpretations of ekphrasis have an essential part in the theoretical framework. Two previous applications of ekphrasis will prove particularly valuable here. Heffernan's interpretation, from 1993, has conceptualized the prevalent attitudes towards the concept of image. It presents a concise definition of ekphrasis as used in the modern literary context. Most subsequent scholars who have written about ekphrasis have used, or at least demonstrated awareness, of Heffernan's definition. His work provides a useful starting point for this thesis. Another theoretical keystone will be Webb's 2009 work on ekphrasis in the Classical sense. She demonstrates the change in the understanding of ekphrasis from its original context in ancient Greece and Rome to the present day. Her work shows that the emphasis on ekphrasis has changed according to the needs of its producers and audience. While Webb's work accuses modern literary scholars of a complete misunderstanding of the concept, this thesis suggests that there may be room for incorporating both Classical and modern interpretations in the treatment of virtual ekphrasis.

This thesis has chosen to apply the term 'virtual ekphrasis' for its discussion on textual representations of digital graphics. It ought to be acknowledged that this term has been used previously by Cecilia Lindhe in her paper about ekphrasis in the context of electronic literature. Her discussion is closely related but sufficiently different that this thesis has reservations about using the same term. The choice to use it, regardless, is based on the expectation that the word 'digital' will instantly convey the subject matter to the readers. Another option, using the term 'virtual', instead, might mislead the readers into thinking about ekphrasis inside virtual environments. This thesis suggests that the term 'virtual ekphrasis' would be more descriptive of Lindhe's work, but terminology such as this is a very subjective matter, especially at a time when digital media remains an evolving area with its entire vocabulary constantly in flux.

The digital graphics represented in the texts discussed in this thesis take the form of virtual worlds. They are immersive visual environments, with auditory sensory input as appropriate sounds, conversation and (sometimes) music, as well as ability for the users to move around in all directions in the artificial landscape. Virtual worlds must be experienced via a technological device. When described, the text acknowledges them as technological creations rather than as fantastic, alternate or supernatural worlds. They can be controlled and shaped with skills theoretically achievable by everyone as a result of learning, rather than using skills that are tied to genetics or dependent on any kind of magic. Their subjective quality can be critically assessed by experts. In all these respects, virtual worlds, or, indeed, digital graphics of any sort, can be compared to non-digital works of art. While virtual worlds are immersive, creating an illusion of the user being in a different place, the user in a virtual world perceives representations of landscapes, objects, animals and people, not actual ones. In a virtual world, the user typically strongly identifies with his or her avatar, but that avatar remains a representation. The user is not physically present somewhere else. Therefore, a virtual world is a representation, just as any other work of visual art is. Hence, virtual worlds qualify for consideration under Heffernan's definition of ekphrasis.

The focus of this thesis has been chosen based on two reasons. Firstly, virtual worlds can be considered a 'pinnacle' of digital graphics. They combine visuals, sound and movement

in a highly immersive experience: an animated film with an essential interactive aspect from the user's part. Whereas a film will tell the same story at each viewing, a virtual world will typically offer choices for the user to influence its narrative, or, if there is no overarching narrative, the user still gets to choose at all times where to go, with what to interact and who to meet. A virtual world embodies most of the features present in digital media that have been previously unachievable in traditional media. If we start out by assuming that digital images are sufficiently different from non-digital images to merit a separate consideration in terms of ekphrasis, then, surely, we must use relevant material that is as different as possible from traditional images. Secondly, when digital graphics have been represented in print literature in the past thirty years, they have tended to take the form of virtual worlds. At first, virtual worlds would have been a fascinating, innovative novelty, best suited for science fiction. Later on, ludic virtual worlds, as MMOs, became sufficiently familiar to the readership, for authors to treat them not as plots in themselves but as vehicles for more conventional 'thriller' narratives. Not until very recently has there been enough public familiarity with other digital potential that other applications of computer-generated graphics have made an appearance.

The virtual worlds represented in the texts discussed in this thesis are all fictional. Some of them were envisioned before the necessary technology existed for their creation. Others were theoretically possible at the time of their writing but the necessary hardware was not commercially available. The fictional nature means that the kind of ekphrasis that arises in the texts is notional, a term coined by John Hollander (1995): it represents an artwork that does not exist in the world of the reader. Tamar Yacobi's 1995 work on pictorial models in narrative ekphrasis will prove helpful in dealing with textual representations of material that the reader has not seen.

This thesis will propose that a key difference between representations of virtual worlds and representations of more traditional works of art is the illusionary experience of space. In such a case, ekphrasis must also be able to deal with the spatial aspect. When representing traditional artwork, ekphrasis typically imagines movement and depth in the still object. In the case of virtual ekphrasis, it does not need to do so, as the movement and depth are already there. In order to address this challenge, this thesis will primarily use elements from

Webb's interpretation of Classical ekphrasis. Secondarily, but still very importantly, this thesis will bring in certain elements from Bertrand Westphal's recent suggestion of a geocritical approach.[1] Geocriticism focuses on the human experience of a space through a mutual cycle of influence between a place and its representations. Further, to particularly address the virtual aspect of the illusionary space, this thesis will strongly draw from Marie-Laure Ryan's 2001 work concerning interactivity and immersiveness in digital worlds from a literary point of view.

This thesis will focus on three key texts: William Gibson's *Neuromancer* (1984), Neal Stephenson's *Snow Crash* (1992) and Charles Stross's *Halting State* (2007). All three are prose fiction, usually classified as science fiction. It will be shown that *Neuromancer* and *Snow Crash* have an important role in the development of digital graphics. They have envisioned new directions and influenced subsequent writers and developers of real life technology. *Halting State* demonstrates the influence of the previous two texts on a number of levels. The three texts represent three different decades in the timeline of digital graphics and their representation: the 1980s, when digital media was still on the threshold of its own emergence; the 1990s, when it was beginning to be felt in everyday lives; and the 2000s, when it had become an ordinary source for information and entertainment. This thesis hypothesizes that the different points on the timeline will represent different attitudes towards the digital media and virtual worlds in particular. It is expected that these differing attitudes will be visible in the respective texts.

Aside from their important positions on the timeline, the mutual intertextuality of the three texts makes them useful to analyse in the current context. Westphal suggests that intertextuality is a key aspect in the creation of literary space and in the subsequent creation of a sense of a space. Intertextuality also functions according to Yacobi's suggestion of creating mental 'models' in ekphrasis. It provides comparative material to assist with the

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[1] Westphal originally put forward the suggestion for a 'geocritical approach' to texts in 2005, in an *esquisse* titled 'Pour une approache géocritique des textes', published on the website *Vox Poetica* (http://www.vox-poetica.org/sflgc/biblio/gcr.html [Accessed 18 October 2014]). His monograph on the subject, *La Géocritique, Réel, Fiction, Espace*, was published in French in 200t and translated into English by Robert Tally in 2011.

experience of the text and with the necessary mental visualisation. The intertextual similarities between the novels to be discussed are rooted in the direct influences from the oldest text to the youngest, as well as in the broader cultural and societal influences relating to digital media. This thesis suggests that the mutual intertextuality in these three texts comes to create a set of motifs and themes that resemble a modern myth. The quasi-mythical narratives of a young male 'superprogrammer' who uses his abilities to gain supreme control over the artificial visual environment of the virtual have obvious implications on the human relationship with the image.

An easy challenge to present to this thesis would be to suggest that analysing one text from each decade under exploration is hardly representative of the overall development. In response, this thesis would point out that the number of fictional texts on virtual worlds has remained relatively small, as demonstrated in Chapter 3. Also, as discussed in the same chapter, and further observed in each of the analytical chapters, the texts chosen for this thesis have been not only very popular, but they have also assumed solid places in the cycle of potential and actualization (Lévy 1998) and in the related geocritical cycle of space and representation (Westphal 2011). The popularity of the texts is representative of their respective times: their readers were prepared to make sense of the new concepts envisioned in the novels. They have also been influential in fields of media and technology, as also discussed in Chapter 3. The influence and seminality of *Neuromancer* and *Snow Crash* make them highly relevant to this thesis topic. They reflect the attitudes of their own times, but their visions have proven durable enough for further appeal and influence. *Halting State* is a recent work, and its influence cannot yet be seen, although smartphone apps and wearable technology currently under development are likely to display features familiar to the novel's readers. Nonetheless, due to its debt to the previous two works and its treatment of the same 'literary myth' of the notion of the 'superprogrammer' in the context of a far higher digital media userbase, this thesis argues that Stross's novel firmly belongs in this analysis alongside the other two.

Thesis structure

Chapter 1 presents an overview of the relevant scholarship. It will begin with a comprehensive history of the concept of ekphrasis, in order to offer explanations for the current fragmentation of the concept. It will discuss the emergence of the current literary view and its disparity with the Classical view. New directions of ekphrasis, such as those reaching towards cinema and music, will be included, together with the few works relating to ekphrasis in the digital context. The section on ekphrasis will be followed by a review of material pertaining to various philosophical theories on space in the context of literature. Finally, this chapter will end with a review of critical studies of fiction relating to virtual worlds, followed by a brief note on the miscellaneous online resources such as blogs used in the discussion of this thesis.

In Chapter 2, relevant previous theories are considered in detail. They will centre on the relationship between word and image and how the introduction of the digital element has affected this. This chapter will include discussion of theories and definitions concerning the technological virtual as well as an introduction to the concept of virtual worlds and reflection on relevant vocabulary. A crucial section of this chapter will define ekphrasis for the purposes of this thesis, incorporating essential concepts such as evocation, psychology and immersion. Related to these concepts is the second major section in this chapter, which will discuss the spatial elements in digital imagery. It will apply the theoretical frameworks of Westphal and Ryan in its exploration the sense of space in virtual worlds and adapt a practical methodology from Ryan for separating the virtual from the mundane in fiction.

The issue of historical context will be the concern of Chapter 3. It will discuss the development of digital graphics, as well as digital games, which have contributed greatly to the notion of virtual worlds. This chapter will examine fiction on virtual worlds in the context of its publication time and observe how the level of penetration of the digital media in society has developed over time. It will also explore how literature and real world technology have influenced each other.

In Chapters 4 to 6, the focus of the thesis will shift from theoretical to more analytical. Each chapter will examine one of the key texts. Chapter 4 will consider Gibson's *Neuromancer* and the innovativeness of its virtual space, known as cyberspace, or the matrix. Chapter 5 will discuss Stephenson's *Snow Crash* and the transformation of the virtual from a frightening, alien space to one of great potential in terms of social space, but also one with strong internal hierarchies. Chapter 6 will explore Stross's *Halting State* and its ludic virtual worlds in a highly contemporary context.

Finally, the concluding chapter will answer the research questions posed in this Introduction by presenting a proposal for virtual ekphrasis in five interrelated principles.

1. Critical review

Literary studies concerned with digital media or digital/information technology are a very recent phenomenon, still very much in development, and sparsely populated. Digital media has certainly been the subject in the new academic areas of New Media Studies and Game Studies, and, to a lesser extent, in fields such as Psychology and Sociology, in addition to its 'own' scientific discipline of Computer Science. However, the study of literature seems to have persisted in a certain resistance towards new media. An early study on 'cybernetics and literature' was published by D. Porush (1985), who discusses the effect of machines and technology on literature in the essay 'Hacking the Brainstem: Postmodern Metaphysics and Stephenson's *Snow Crash*'. J. Tabbi (1996) returns to the same topic a decade later in *Postmodern Sublime: Technology and American Writing from Mailer to Cyberpunk*. The inter-relationship between literature and real world technology has been studied by Warrick (1982) in *The Cybernetic Imagination in Science Fiction* and Ferro and Swedin (2011) in *Science Fiction and Computing*. Other notable scholars and studies include E. Aarseth's (1997) seminal *Cybertext*: *Perspectives on Ergodic Literature*, the several works by N. K. Hayles (1999, 2002, 2005, 2008), G. Landow's (2006) *Hypertext 3.0*, the works of M-L. Ryan (1991, 1999, 2001, 2004, 2006, 2010), and *The End of Books – Or Books Without End? Reading Interactive Narratives* by J. Yellowlees Douglas (2000). The initial interest of literary scholars in the possibilities afforded by the emerging new media in the 1990s seemed to fade out in the early 2000s, until the interest picked up again, to a lesser extent, in the second decade of the current century. In the autumn of 2011, a special issue of the Comparative Literature journal *CLCWeb* called for a greater awareness and a need for more discussion of intermediality in general and the digital, in particular among literary studies. It is likely that as a new generation of scholars comes of academic maturity, having grown up with digital media, more research into the digital from the literary perspective will emerge.

Due to the scarcity of existing critical studies in this area, it is not possible to provide one focused review of previous scholarship. The notion of ekphrasis in the digital context has been barely touched upon in a less than handful of papers positing the possibility, or applying it in a very limited manner. In order to provide a comprehensive discussion on the

theory and application of virtual ekphrasis, it is, therefore, necessary to draw from several different areas of existing scholarly research.

1.1 Ekphrasis from the Classical Greece to the 21st century

Although the academic interest in ekphrasis has greatly increased in the past three decades, the concept itself still seems to present something of a dilemma to its scholars. It seems that ekphrasis, in its resistance of one overarching definition, also elides the kind of assumed background knowledge that many other concepts in literary scholarship take for granted. Most times, when a new work of research on ekphrasis is published, a large part of the publication is given over to an explanation of what ekphrasis is thought to be by that scholar in question, what it might be in the opinion of others, and what it has historically been thought to be. Whilst a summary and discussion of preceding scholarship is, of course, essential to any critical study, publications on ekphrasis seem to be particularly attached to repetitions of the same phrases and the same materials, without reaching a satisfactory consensus.

Consequently, much of the scholarship of ekphrasis remains resistant to application of new ideas and new areas, to the extent that new evidence convincingly presented is either ignored or deemed incompatible with the dated studies of the original 'authorities'. The most striking development in studies of ekphrasis, since the appearance of the concept in literary scholarship in 1955, has been the 'rediscovery' of ekphrasis as a Classical oratorical device. In the Classical thought, ekphrasis could be used in the context of any vivid description (Webb 1999 and 2009, Koelb 2006, Francis 2009) rather than being restricted to verbal descriptions of visual artworks, as the ekphrastic canon, both in literary and Classical studies, would have it. Nonetheless, J. Koelb's study, *The Poetics of Description: Imagined Places in European Literature,* inspired by R. Webb's original 1999 paper, 'Ekphrasis Ancient and Modern: the invention of a genre', is barely cited at all. Webb's work, while more often acknowledged, seems not to have inspired the kind of rethinking of ekphrasis its scope and detail might have given reason to expect. Koelb is a literary scholar whose focus in the above work lies in the romantic British poetry. Webb is a Classicist who, in her work, criticizes modern literary scholars for what she sees as their limited

treatment of ekphrasis. Between themselves, Webb and Koelb represent the two fields of study that have been involved in the ekphrastic discourse since the 1950s, but, as will be seen below, both fields continue to rely on either outright erroneous or simply unduly restrictive notions.

Respectively, Webb and Koelb, as well as J. Heffernan (1991 and 1993) have provided extensive historical overviews of the development of the concept of ekphrasis. Webb has focused on the Classical era, in contrast to the 'creation' of the literary concept of ekphrasis in 1955, whereas Koelb has traced ekphrasis from the Classical era to 1955. Heffernan's bibliography of ekphrasis from 1955 to the early 1990s has since been supplemented by further literature reviews such as that of A. S. Becker (2003) in 'Contest or Concert: A Speculative Essay on Ecphrasis and the Rivalry between the Arts'.

The roots of ekphrasis lie in the Classical Greek words *ek*, 'out', and *phrasis*, 'speak', used to form the verb *ekphrasein*, 'to speak out, to tell'. As a method to increase vividness of a spoken account of objects, people or events, it was a known technique used by rhetors and discussed in oratorical manuals, known as *Progymnasmata*, written for the benefit of students of rhetorics in the first few centuries of the Common Era. The main ancient authors discussed by Webb, in this context, are Theon, pseudo-Hermogenes, Aphthonios/Aphthonius, Nikolaos/Nicolaus and Quintilian. The earliest extant use of the word 'ekphrasis' is attributed to Dionysius of Halcarnassus in the late first century BCE, in the context of advising rhetors to be careful with their use of emotive, graphic descriptions, the extensive use of which he notes as being appropriate to prose history and poetry. Lawcases, he notes, require more adjustment. Among the listing of appropriate subjects for ekphrasis, the Classical authors include general events, festivals, persons, places, times and seasons, animals and plants, paintings and statues. Such a list is in clear contrast to the modern view of literary ekphrasis, which focuses on the verbal account of a single artwork. Theon, additionally, includes *tropos*, the manner in which something was done. Works of art, as paintings and statues, are only mentioned by Nikolaos, but, even then, they do not seem to inhabit any kind of a special position among the subjects listed.

The subject matter in Classical ekphrasis did not hold the same place of importance as in the modern concept. The crucial element of ekphrasis in the *progymnasmata* is the ability of the words of the rhetor to 'bring the subject before the eyes' or 'to make listeners into spectators' (Webb 2009: 8). Quintilian and other rhetors list several features of rhetoric delivery as means to achieve this vividness, or *enargeia*. These features consist of inclusion of details in terms of actions and appearances, inclusion of attendant circumstances with no direct relevance other than establishment of character, and expansion of one element of narration. Ekphrasis was distinguished from narration by the application of *enargeia*. Webb notes that the ekphrastic technique could be applied equally to verse or prose, but that due to constraints in the amount of available material, she has chosen to focus on the rhetorical examples in her own work. Unfortunately, no equivalent dedicated studies on ekphrasis, as used in Classical poetry or in Classical historiography, have been published yet. S. Bartsch's (1989) *Decoding the Ancient Novel,* a study on description in the ancient novel is valuable, but, published ten years prior to Webb's original paper, it does not benefit from the latter's research.

In her study, Bartsch demonstrates that what we would understand as ekphrastic descriptions of artwork are plentiful in the ancient novel. However, they only appear among other similar detailed descriptions, for example, those of animals. Koelb quips that 'Had twentieth-century literary theorists been more fascinated by natural history than they were of art, they would have given us a different modern definition of ecphrasis' (2006: 3). Bartsch argues that the term ekphrasis was only applied exclusively to the description of visual art after the fifth century BCE. This was the time of the emergence of the so-called 'ekphrastic epigram', a primarily Hellenistic form of poetry, which features descriptions of artworks. Most Classical scholars who discuss the ekphrastic epigram approach it from the perspective of the modern definition of ekphrasis. Recent scholars who have taken part in the discussion of the ekphrastic epigram include S. Goldhill (1994), K. J. Gutzwiller (2002), G. Nisbet (2003), G. Zanker (2003, 2004) and M. Squire (2010).

Classical ekphrasis, as presented by Webb, was fundamentally connected to imagination. When the speaker prompted mental images (*phantasiai*) by using vivid language, the mechanism of the 'mind's eye' was activated through the listener's emotions, associations

and memories. Quintilian calls mental images 'the means by which images of absent things are represented to the mind in such a way that we seem to see them with our eyes and to be in their presence' and observes that 'Whoever has mastery of them will have a powerful effect on the emotions' (cited in Webb 2009: 95). According to Quintilian, in order to produce proper *enargeia*, the speaker had to imagine the subject for himself, first of all. In order to cause emotion in the listeners, it was necessary for the speaker himself to be emotionally moved. Webb also cites the definition of mental images by an orator known to modern scholars as Pseudo-Longinos. To him, *phantasiai* resulted from the effects of inspiration and passion. This enabled the speaker to 'see' what he was speaking about and to bring forth mental images in his listeners as well.

Webb suggests that Classical ekphrasis was primarily a psychological rather than a linguistic phenomenon. Unlike in the case of later views on ekphrasis, the Classical desire was not to verbally imitate the visual of the object, scene or person, in order to mimetically reproduce it, but, instead, the aim was to reproduce the *effect* of the visual. The vivid language stimulated internal mental schemata, which proceeded to rouse emotions. Classical ekphrasis takes place in a mutual creative process between the speaker and the listener, who together create the affective mental images. A successful use of *enargeia* by the speaker makes the listeners feel as though they were personally present for the events described. Webb argues that *enargeia* is very closely related by fiction, which also enables the audience to imaginatively and emotionally connect with the text, even while remaining aware that the representation of the text is not real.

Koelb has observed that although ekphrasis was not equated with descriptions of artworks in Antiquity, comparisons between poetry and painting were commonplace. In the late sixth century BCE, Simonides described poetry as speaking painting, or painting with a voice, and painting as silent poetry. Such comparisons may have served to contribute to the 20th- and 21st-century perceptions of art ekphrasis as a distinct genre, extant since the ancient times. Many modern studies quote Horace's famous remark '*ut pictura poesis*' – 'as painting, so is poetry' – to demonstrate a close connection between these two 'sister arts' dating back from the first century BCE, but the context of the quote reveals that Horace is

talking more about the response of the reader or the viewer, rather than the process of representation:

> Poetry is like painting. Some attracts you more if you stand near, some if you're further off. One picture likes a dark place, one will need to be seen in the light, because it's not afraid of the critic's sharp judgement. One gives pleasure once, one will please if you look it over ten times. (*Ars Poetica 361*, cited in Koelb 2006: 44)

Horace is not interested in the content, but points out that regardless of the medium, the response to a work of art depends on a number of factors. In effect, he advises the artist to present the work in the appropriate circumstances to show it at its best.

In post-Classical texts, the term 'ekphrasis' occurs very rarely. Koelb suggests that it is likely that the term was being translated in Latin and in the subsequent languages mostly as 'description'. She puts forward that the use of Classical ekphrasis survived in practice, if not in name, due to 'place ekphrasis' rather than art descriptions. By 'place ekphrasis', she means evocative descriptions of significant places and their connections to the mental state of the associated characters. In support of her argument and her subsequent analysis of several Romantic poems, she references Aphthonius's advice on place ekphrasis: the emphasis lies on how to establish a sense of a place rather than simply describing it. Aphthonius, effectively, was suggesting how to create a sense of immersion, i.e. a feeling for the listener that he or she were personally present in the place evoked by words.

Originally published in 1766 and translated into English in 1836, G. Lessing's *Laocoön* removed visual art and poetry from their perceived Classical cooperation and reframed them as rivals. In terms of text, he relegated description of any sort to a position inferior to narrative. The only function of description became to serve the narrative. Lessing suggests that description caused the reader to 'stop' in the desirable progression of the narrative and to 'linger over' an object. He argues that the division between the arts cannot be bridged in any way. Hence, objects are best represented by other objects, and sequences of events by other sequences of events, i.e. narrative. Lessing's work became immensely influential in the studies and perception of the relationship between the arts across Europe, especially after the rediscovery of his work in the early twentieth century. Many of his arguments can

be still detected in modern works concerned with the relationship between word and image, as will be discussed in Chapter 2.

Webb has traced the first modern usage of the word 'ekphrasis' to the French classicists Edouard Bertrand and Auguste Bougot in their respective 1881 studies of the rhetor Philostratus. Bertrand suggests an ancient tradition of competing descriptions of art, a named genre represented by poets and rhetors such as Catullus, Virgil, Statius and Philostratus. These French Classicists may have had an influence on the formation of the views of Leo Spitzer in 1955, which, as Webb (1999) has demonstrated, launched the modern literary concept of ekphrasis as a verbal representation of a visual representation, the definition succinctly coined by J. Heffernan (1991). In his aggressive critique of Earl R. Wasserman's 1953 work *The Finer Tone* and its considerable exploration on Keats's 'Ode on a Grecian Urn', Spitzer negatively contrasts Wasserman's approach with his own European background, with a 'centuries-old tradition […] especially in the classical [sic] and the French fields' (p. 203). Apparently, in order to emphasize this European/Classical background, Spitzer brings the concept of ekphrasis into his critique. Due to their significance in the history of the modern scholarship on ekphrasis, his lines are worth quoting here in their entirety:

> [I]t belongs to the genre, known to Occidental literature from Homer and Theocritus to the Parnassians and Rilke, of the *ekphrasis*, the poetic description of a pictorial or sculptural work of art, which description implies, in the words of Théophile Gautier, "une transposition d'art," the reproduction through the medium of words of sensuously perceptible *objets d'art (ut pictura poesis)*. (Spitzer 1955: 207).

In a footnote, Spitzer observes that in Antiquity, poetic ekphrasis was 'often' applied to circular objects, such as shields and cups. As with all of his discussion about ekphrasis, he does not provide evidence, but we can speculate that he had in mind the description of the shield of Achilles in the *Iliad*. In subsequent scholarship, the shield of Achilles, alongside Keats's 'Grecian Urn', has become something of an ur-object, a *sine qua non* for most publications dealing with ekphrasis. This perception of the shield as a seminal artwork in the history of ekphrasis has been strongly criticized by Webb (2009) and by J. A. Francis (2009) in 'Metal Maidens, Achilles' Shield, and Pandora: The Beginnings of "Ekphrasis"'.

Koelb suggests that Spitzer's original source may have also been an entry in the 1949 *Oxford Classical Dictionary* by John Dewar Dennington. This entry defines ekphrasis as a 'rhetorical description of a work of art, one of the types of progymnastama [...]. The efflorescence of the representational arts in the second century A.D. gave an impetus to this type of writing'. (cited in Koelb 2006: 2) Like Spitzer, Dennington does not provide adequate references, although he erroneously attributes the term to J.W.H. Atkins's article about the *Progymnasmata* in the same volume. Atkins translates 'ekphrasis' as 'description' but it is Denniston who restricts it exclusively to art (Koelb 2006: 2). Denniston references Paul Friedländer's 1912 *Johannes von Gaza und Paulus Silentiarius*, in which Friedländer explains ekphrasis as the activity of describing, applied by Theon and Hermogenes to persons and things, places and times (cited in Koelb 2006: 85; her translation). To this selection, Aphtonius added animals and plants. Significantly, Friedländer denies outright that ekphrasis could be considered as a completely distinctive artistic genre. How Dennington transformed Friedländer's explanation into a near-complete reversal in his own encyclopedia article is unclear.

His sources aside, Webb has shown that Spitzer was wrong in several key matters: in Antiquity, ekphrasis was not considered a genre of its own but a device inside genres; it was not limited to descriptions of work of art, nor was it in any way primarily applied to 'circular objects'. Nevertheless, Spitzer's approach was fully adopted by subsequent scholarship, as will be seen below. Besides focusing on the principle of a single artwork, Spitzer emphasizes the descriptive aspect of ekphrasis: the description needs to stand clearly apart from any 'symbolic or metaphysical' inferences drawn from the description itself. He also proposes a 'slow time', the stilled moment of 'the now', when the poet has stopped to gaze on the object, and the poet's subsequent desire to learn the secrets the objects holds, i.e. to possess it and its beauty. Further, he discusses how the poet 'envoices' the silent art object by giving it words through his own art.

Spitzer's essay and his definition of ekphrasis was lauded by M. Krieger (1967), in his essay 'Ekphrasis and the Still Movement of Poetry; or, Laokoon Revisited', in which he, likewise, wrote on the 'Ode to the Grecian Urn' by Keats. Krieger's focus lies more on the broader concept of ekphrasis rather than on a close analysis of the specific poem. His essay

can be said to be the first modern consideration of ekphrasis as a theoretical concept. Krieger coined the term 'ekphrastic principle' in the reprint of the original essay in the same year, as the result of his wanting to establish a broader application of the term 'ekphrasis' (Krieger 1992). His 1992 work, *Ekphrasis: The Illusion of the Natural Sign,* which expands from the 1967 essay, is one of the few full-length monographs written about ekphrasis. Krieger's original essay has been called 'the single most influential attempt to articulate a theory of ekphrasis' (Heffernan 1991: 298) and 'without question the single most influential statement on ekphrasis in American criticism' (Mitchell 1994: 153, n.8).

While Krieger adopts Spitzer's definition of ekphrasis as a description of a work of art, he wishes to include, within the ekphrastic principle, poems that seek to emulate visual art by achieving 'the spatiality of the pictorial instant' (Krieger 1992: 45). While Lessing sees poetry, the verbal art, as fundamentally bound to time, and the visual arts as connected to space, Krieger argues that poetry can and does encompass both at once, by 'stilling' the movement of language by means of ekphrasis. He focuses on what he sees as the source of the 'ekphrastic impulse' in the semiotic desire for the 'natural sign', a written sign that would have 'the world captured in a word' (p. 11). He argues that this desire leads to the preference of the immediacy of the visual over the mediation of the text. Krieger discusses in his 1992 work the concept of representation as *enargeia*, which later returned to ekphrastic scholarship in the Classical context in the works of Webb (1999, 2009).

J. Heffernan published his work on ekphrasis, an intial essay titled 'Ekphrasis and Representation' (1991) followed by a monograph, *Museum of Words: The Poetics of Ekphrasis from Homer to Ashbery* (1993), around the same time as Krieger. His definition of ekphrasis as 'verbal representation of a visual representation' (1993: 3) has been frequently cited since. Although his definition, indebted to Krieger's expansion of Spitzer's definition as description, emphasizes that ekphrasis goes beyond pure description, a surprising number of later scholars have retained and criticized the Spitzerian definition, although, in most cases, they fail to attach a name to it (e.g. Webb 1999; Eidt 2008, Francis 2009). Typically, these scholars, dissatisfied with what they perceive as an insufficient, simplistic definition, have proceeded to significantly develop the concept of ekphrasis. In *Picture Theory: Essays on Verbal and Visual Representation*, W.J.T. Mitchell (1994) notes

that as the perception of ekphrasis as pure description lingers, ekphrasis remains the text's 'Other'.

Inspired by Mitchell's 1986 *Iconology: Image, Text, Ideology,* in which literature and the visual arts are interpreted as engaging in a constant struggle for dominance, Heffernan (1993) writes extensively about what he sees as internal dynamics and power play of ekphrasis. This is his major disagreement with Krieger. Heffernan argues that rather than still the narrative, ekphrasis draws out a further narrative from the moment of the representation of the visual art. In addition to the power struggle between the (presumed) male gazer and the (presumed) female object of the gaze as well as between text and image, another dynamic layer of conflict is, in Heffernan's view, presented by what he calls 'representational friction.' The term refers to the acknowledgement of the difficulty of the dynamic verbal narrative to represent the fixed forms of a visual representation, or differences between the visual representation and its referent. Heffernan's conflict-centred view and its related gender dynamics are challenged by T. Yacobi (1995) in Pictorial Models and Narrative Ekphrasis', E. B. Loizeaux (2008) in *Twentieth-Century Poetry and the Visual Art* and Francis (2009), who focus on the complementary and cooperating aspects of text and image in ekphrasis. Heffernan also develops concepts already familiar from Spitzer: the concept of the gaze and the writer's desire to possess the object, as well as the idea of giving the silent object an ability to 'speak', which Heffernan calls *prosopopoeia*.

Heffernan acknowledges that most modern study of ekphrasis is based on poetry rather than prose. Even with this awareness of this imbalance, he admits that his own study, similarly, only engages with poetry. Thus Heffernan himself fails to address the issue. Indeed, only a few papers in the past twenty years have dealt with ekphrasis in specific prose works (Steiner 1989; Mandelker 1991; Alexiou 1993; Rischin 1996; Trussler 2000), and little has been published in terms of prose ekphrastic theory. Thus it is left to each individual scholar writing about ekphrasis in prose works to make of prose ekphrasis what they will.

As one of the few scholars to consider prose ekphrasis, Yacobi (1995) has considered the topic from a semiotic perspective. Her study examines the place of ekphrasis in relation to

narrative. She makes a point about the valuation of narrative above description in Western literature, which has led to the notions of conflict between the two, and, by extension, to the notions of conflict between image and text. Description has been seen to bring a narrative to a standstill (Steiner 1982), much like in the case of ekphrasis and poetry (Krieger 1967, 1992; Mitchell 1989, 1994). Yacobi suggests that the exploration of ekphrasis in prose has been hindered by the traditional perception in the Western culture that a faithful interart mimesis is of greater value than representation that does not seek to slavishly repeat the features of the artwork. The latter instance happens when an artwork of any medium is being represented in another medium. She points out that an object of visual art can never be fully reproduced in words, so verbal striving for faithful imitation is pointless. She suggests that the less particular the visual image, i.e. a 'model', present in the text is, the more evidently it can be seen to function as an aid to the narrative, rather than as its rival.

Interest in ekphrasis among Classicists, as well as among literary scholars, has also increased in the past couple of decades. The increased interest is observed in Goldhill's 2007 paper, 'What is Ekphrasis For?' in which he catalogues a number of recent works on ekphrasis specifically in the Classical field. He references Goff (1988), Zeitlin (1989, 1994), Becker (1990, 1995), Elsner (1991, 2002), Stanley (1993), Laird (1999) and Barchiesi (1997). We can add Fowler (1991) to Goldhill's list. Goldhill acknowledges that ekphrasis has also been studied by modern literary scholars, citing Krieger, Heffernan and Mitchell. Yet, he laments the fact that the non-Classicists rarely know the Classical material adequately, a criticism that has been repeated by Webb. While Webb has convincingly demonstrated that the primary Classical material treats the concept of ekphrasis very differently from the way ekphrasis is discussed in the majority of modern scholarship, Goldhill still retains the view that the term refers to poetic descriptions of visual artworks alone. All the works catalogued in Goldhill's paper similarly understand ekphrasis as poetry about visual art, rather than considering a much wider range of ekphrastic topics, as shown by Webb. Becker (1995), for instance, claims to provide a definite guide to what he calls the very first attestation of ekphrasis in European literature, the shield of Achilles. His definition of ekphrasis calls it the poetic device that allows verbal art to represent visual art.

In *Roman Eyes: Visuality & Subjectivity in Art &* Text, J. Elsner (2007) admits that the term 'ekphrasis' has come to be applied exclusively to descriptions of works of art only in the twentieth century, as opposed to all kinds of vivid description in Antiquity. However, he suggests that in Classical texts there existed a 'trope of epic' that focused on 'the description of a work of art to offer a metatextual reflection on the poem as a whole' (2007: 67). This was already put forward by Bartsch (1989) but Elsner sees this 'trope' as a potential genre in its own right, an argument familiar from Spitzer's definition of modern ekphrasis and rejected by Webb. Yet, also in 2007, Elsner and Bartsch, writing in the special issue of *Classical Philology*, describe ekphrasis in terms wholly familiar to the modern literary scholar. They call ekphrasis words about an image, often embedded in a larger text. They paraphrase and summarize Heffernan and his predecessors in noting that ekphrasis is to be characterized as gendered, spatial, static, epiphanic and mute. They dismiss those who 'would limit it to definition of the ancient *progymnasmata*' as 'purists', while 'modernity' applies it to the visual arts. In the footnote, the writers cite their own earlier works as well as Webb's paper of 1999, leaving the reader in no doubt as to which of them is considered a 'purist' and which are regarded as 'modern'. In the same special issue, in an essay titled 'Why Ekphrasis?', V. Cunningham writes about ekphrasis in similar terms: she calls it 'that pausing […] before, and/or about some nonverbal work of art' (2007: 57).

Webb's efficient rejection of art ekphrasis as a 20th century construct, based on the study of the ancient *progymnasmata*, means that it would be easy to permanently divide the scholarship of ekphrasis into two strands: the one in studies of Classics and the modern literary one. Yet, we have seen that prior to the publication of Webb's work - and, to an extent, overlapping with it - the concepts of ekphrasis in the field of Classics and in the field of modern literary studies have been remarkably alike. Webb's re-interpretation of ekphrasis as vivid evocation of any kind of situation, to the the point that the listener/reader feels as though he or she is personally part of that situation, appears, therefore, to have been a notable development in studies of ekphrasis in general. As discussed above, her views have not been uncritically accepted even in her own field, which, like literary studies, bears the burden of tradition of art ekphrasis. It bears emphasizing that this thesis finds Webb's work convincing and useful in terms of a theoretical framework. Therefore, whenever this

thesis refers to 'Classical ekphrasis' it employs Webb's interpretation rather than the traditional view concerning Classical texts solely on visual artworks.

Webb's reconceptualization is part of a series of new developments in the study of ekphrasis which started in the mid-1990s. In 1995 J. Hollander suggested the concept of 'notional' ekphrasis, the verbal representation of a wholly fictional work of art, as distinct from 'actual' ekphrasis, the verbal representation of an existing artwork, in his work *The Gazer's Spirit: Poems Speaking to Silent Works of Art*. Otherwise, Hollander's idea of ekphrasis is fully in line with his modern literary academic ancestors; he applies it to poetry written about artworks exclusively and references the shield of Achilles motif as well as Classical authors. This division of ekphrasis into notional and actual has been developed further by P. Barry (2002), who subdivides each into two categories in his essay 'Contemporary Poetry and Ekphrasis'. According to him, within actual ekphrasis, 'closed' ekphrasis clearly identifies the artwork it represents, while an 'open' variant is unidentified and could be understood as a representation of an actual scene rather than a visual representation of that scene. In terms of notional ekphrasis, the 'fictional' variant indicates a fictional, believable construct, whereas 'conceptual' ekphrasis refers to often metaphorical or allegorical art object with properties that no real artwork could have.

The readiness to consider the ekphrasis of the entirely fictional may have opened the way for new directions in ekphrastic study. In *Getting the Picture: The Ekphrastic Principle in Twentieth-Century Spanish Poetry*, M. Persin (1997) notes that the 20th-century Spanish poets responded to not only 'Classical' arts such as painting, sculpture and theatre, but also to 'uncanonized' forms of the arts like television, cinematography, photography, advertising, comics, posters, and other examples of mass culture and mass media. C. Clüver's 1997 paper, 'Ekphrasis Reconsidered: On Verbal Representations of Non-Verbal Texts', includes in ekphrasis 'non-verbal texts', i.e. any composition in a non-verbal sign system represented verbally. In the Introduction to *Word & Image* 15.1 (1999), a special issue on ekphrasis, M. Klarer suggests that ekphrasis should be separated from its late 20th-century theorising and examined as a vehicle through which we can reconstruct dominant concepts of representation in specific cultures and periods.

In a 2001 paper, 'A Concert of Paintings: "Musical Ekphrasis" in the Twentieth Century', S. Bruhn proposed a 'musical' ekphrasis, a response to a work of visual art by a composer with their own creative act, just as a poet is inspired to a creative response by writing a poem. In her comparison, Bruhn follows the usual path of modern literary ekphrasis from Spitzer onwards, assuming literary ekphrasis to be a purely poetic genre. The main questions in her work centre on development of a methodology of musical ekphrasis and on the ability of music to narrate or portray works of art by means of mimesis or reference. As another step in the turning of ekphrasis towards media other than the traditional print text and static artworks, L. M. Sager Eidt (2008), in *Writing and Filming the Painting,* her study of 'filmic' ekphrasis, argues that ekphrasis needs not be purely verbal, as a film based on or representing an artwork can be seen as having an ekphrastic effect on the audience. While she is correct in stating that a film can display the filmmaker's interpretation on the painting as well as affecting the audience, a film is primarily a visual representation in itself. What Eidt seems to be proposing here is a visual representation of a visual representation, which approaches E. Kafalenos's (2003) theory on 'double coding' and Ryan's (1990) ideas about boundaries within narratives.

Considering the relative obscurity of ekphrasis as a theoretical concept as well as the small numbers of literary researchers exploring digital issues, it is perhaps not surprising that ekphrastic scholarship has not yet fully reached the computerized realms. At the same time, computer-generated graphics have drastically improved in quality and become a mainstay of entertainment. The earliest mention of ekphrasis in the digital context seems to have occurred in J. Bolter's 1991 consideration of text and the digital image, which he has since revisited more recently in 'Ekphrasis, virtual reality, and the future of writing' (1996) and in *Writing Space: The Computer, Hypertext, and the History of Writing* (2001). In these works he argues that the modern rapid increase of the visual, at the cost of the textual, creates a reversed ekphrasis, in which images are tasked to represent words, rather than the other way around. Following Krieger (1992), he suggests that the increase of the visual, apparent in the digital media, is a symptom of the desire for the 'natural sign'. While virtual reality appears to achieve the natural sign by placing the viewer within the computer-generated immersive environment, he reminds us that, even then, virtual reality rests on a system of signs in the form of computer programs.

Hypertext, sections of narrative linked to each other by means of hyperlinks, has attracted some attention from scholars from the ekphrastic perspective. Using the definitions of Krieger (1992) and Mitchell (1994), J. Tolva (1996) argues in a conference paper, '*Ut Pictura Hyperpoesis*: Spatial Form, Visuality, and the Digital Word', that a hypertext 'cluster' of linked fragments of text acts in an ekphrastic way. Rather than simply describing such a spatial textual structure, it evokes one through uses of colours and the reader's experience. Contrary to what might have been expected, applications of hypertext did not disappear by the end of the first decade of the twenty-first century but evolved into what is now known as interactive fiction (Montfort 2005). A. Kashtan (2011) argues in 'Because It's Not There: Ekphrasis and the Threat of Graphics in Interactive Fiction' that ekphrasis is the characteristic mode of visual representation in interactive fiction, as online text seeks to (re-)create and evoke the experience of the typically ludic fiction, which allows the reader/user to select his/her own path through the fiction. Although approaching his argument from the background of the standard scholars of ekphrasis (Mitchell, Krieger, Heffernan), Kashtan is one of the extremely few researchers to cite and accept Koelb's work and to incorporate the Classical perspective in his study. Another scholar who adopts the Classical approach in the context of digital media and electronic literature is C. Lindhe (2010), who uses the term 'virtual ekphrasis' to describe her inquiry. In her short article, '"Bildseendet föds i fingertopparna" Om en ekfras för den digitala tidsåldern', she re-examines Classical ekphrasis and *enargeia* as tools for analysing digital artefacts and demonstrates how an 'aesthetic of tactility' arises from the interaction between a digital work of art and the user. Lindhe's Swedish paper has been published in English as '"A Visual Sense is Born in the Fingertips": Towards a Virtual ekphrasis' in *Digital Humanities Quarterly 7.1* (2013).

As the above shows, the potential for ekphrasis in the context of computer-generated graphics is strongly present, but only a few scholars have so far chosen to approach the issue, and even then mostly in short articles or book chapters. Further, all their focuses have centred on the representations on various applications of digital media, from virtual reality itself to online interactive fiction and works that combine digital image and text. This thesis

intends to take a step back towards the 'traditional' media and investigate how ekphrasis functions when print text seeks to represent works of digital visual art.

1.2 From physical and mental space to virtual space

Computer-generated visual art typically has a strong element of space. Besides the dominating visual, such artworks often incorporate sounds and a sense of perspective and/or movement. For the moment, the existing level of technology prevents the addition of olfactory or gustatory elements, which would further contribute to the feeling of a spatial environment. The spatial aspect is particularly noticeable in the case of virtual worlds, which intentionally situate the user-viewer in a computer-generated landscape, wholly fictional or representational of a real space. Thus a virtual world, although consisting of visual art, closes the traditional gap between the viewer and the object and transforms the viewer into an experiencer. It is for this reason that this thesis will also examine certain literary theories of space.

Certain approaches to ekphrasis reach beyond the currently prevailing view of the concept as pertaining to static works of art by also including spatial elements. Classical ekphrasis, as put forward by Webb and Koelb, includes events among its subject matters. Koelb has suggested 'space ekphrasis' as a fundamental preserver of the Classical mode throughout the post-Classical times. Bolter, Tolva and Lindhe have all briefly considered ekphrasis and space in their works concerning digital literature. However, with the exception of Koelb, the considerations of space in ekphrasis have so far not paid much attention to the emotions, associations and symbolism linked to space. G. Bachelard (1969) has suggested, in his seminal *The Poetics of Space*, that we create human spaces by attaching feelings and significances to them. This thesis puts forward that despite lacking a physical dimension, virtual worlds produce sufficient affect in the users to evoke the sensation of a space.

Space in the context of literature has been a subject of study for decades. As an example, V. Propp (1968) posits in his *Morphology of the Folktale* that the fundamental events of the plot of a narrative arise from the existences of two antithetical spaces and their mutual opposition. More recently, following the so-called 'spatial turn' in literary and cultural

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studies, F. Moretti (1998) has suggested in *Atlas of the European Novel 1800-1900* that each genre of literature has its own space, which is closely correlated to the plot. As early as 1937, M. Bakhtin proposed the literary 'chronotope', an intrinsic connection between time and space within narrative. His essay, originally written in Russian is available in English in *The Dialogic Imagination: Four Essays* (1981), edited by C. Emerson and M. Holquist. The chronotope can be said to form the construction of a fictional world. The concept of the chronotope has been considered problematic, as Bakhtin does not offer a strict definition of it any point, nor does he include rules for its identification. Subsequently, the chronotope has been subject to a great deal of interpretation. In two papers, B. Keunen (2000, 2010) has provided certain useful insights in this regard. He uses the Bakhtinian conceptual framework to distinguish genre memory, mental structures pertaining to generic chronotopes and acquired by readers in their cognitive development, and memory schemata, activated during the reading process, which enable the reader to recognize the relevant chronotopes and the corresponding narrative genre. Further, he observes that all definitions and aspects of the chronotope are linked to the concept of imagination. A chronotope is defined when 'it brings to mind an image that can be observed by the mind's eye' (Keunen 2010: 35). Bakthin's chronotope is situated by Keunen in the philosophical tradition of imagination linked with experience. The relevance of Bakthin's chronotope to the current study is illustrated by J. Ladin (2010), who examines Keats's 'Ode to a Grecian Urn' as an example of chronotopes in poetry, and by Landow (2006), who suggests that Bakhtin's concept of textuality anticipated hypertext.

In his philosophical reflection on literary space, particularly on mental literary space, *The Space of Literature*, M. Blanchot (1982) considers both the process of reading and its counterpart, artistic creativity, focusing on inspiration. In his discussion on the image and on seeing, he places the gaze at the heart of artistic inspiration. The gaze bridges the physical separation between the gazer and that which is seen, creating a contact, the image. Seeing creates an encounter with the seen, producing fascination, which is, at once, appealing and terrifying. To write, he claims, is to let that fascination, caused by seeing, rule language, the word. An artist of any kind, he suggests, creates a whole new reality, a space separate from the rest of reality. The artistic work belongs to this new reality. Although much of Blanchot's work is mainly reflective in its high level of abstract

complexity, some of its elements, such as the above, can be relevant in the study of ekphrasis.

In his essay 'On Other Spaces', originally given as a lecture in 1967, M. Foucault (1984) calls the 20th century 'an epoch of space', in contrast to history, the 'obsession' of the previous century. Citing Bachelard and the philosophers of phenomenology, Foucault argues that the human living space is not empty and homogenous, but one imbued with qualities and consisting of a set of relations. His discussion focuses on what he calls heterotopias, 'counter-sites', on which real sites are represented, contrasted and inverted. He argues that these exist in all cultures, but that they are subject to historical and cultural changes. Space as a dynamic set of relations was echoed by H. Lefebvre (1991), who sees space as a 'product' of spatial practice, representations of space and representational spaces. In *The Production of Space*, he rejects the Cartesian model of ideal/real space, but is optimistic about the emergence of new kind of spaces, 'differential spaces'. The contributions of Foucault and Lefebvre have been developed further in *Thirdspace* by E. Soja (1996) who has broken the duality of the real/not real by forming the concept of thirdspace, i.e. spaces where the real and the imagined come together, which lie between the Real and the Other.

The philosophical concept of 'possible worlds' had existed before L. Doležel's 1998 proposition, originating in the area of Logic, but his own work, *Heterocosmica*, has become one of the best-known studies on the matter. The possible-worlds semantic theory posits possible worlds as examples of what our world might have been in other circumstances. Fictional worlds are their subset, artifacts constructed by human creativity. The strict separation of fictional worlds and the real world according to the possible-worlds theory is placed in opposition to mimesis, i.e. in opposition to attempts to represent the real in fiction and to make fictional characters to 'come alive'. Fictional representations of people, places and objects are linked to their actual prototypes by their 'transworld identities', which indicates the use of one counterpart, or a fictional version of the real, chosen from among several possibilities. Doležel's rejection of the representation of the real or the calling into life of the real has implications to a study of ekphrasis which, regardless of its era, seeks to represent a visual object or an event that is assumed to have a real, or a real-like (notional)

basis. As the assertion of this study (and all those who write about ekphrasis) is that such a representation is possible, Doležel's theories cannot be adopted here in their entirety. It is also uncertain how well his theories could be applied to a situation in which a user enters a virtual world and changes it by means of her or his actions, as part of its fictional story.

As many theories on space link it directly to imagination and the creative process, it is unsurprising that wholly imaginary fictional spaces – fantastic or futuristic worlds – also arise in the discussion. In *Metamorphoses of Science Fiction*, D. Suvin (1979) has observed that the purpose of science fiction is not to provide a credible vision of the future, but to reflect the issues of the writer's contemporary world by means of the creative exercise. Science fiction has been argued to be a particularly postmodern genre of literature. B. McHale (1987) has discussed SF from the postmodern perspective of space in *Postmodernist Fiction*, calling it the ontological genre par excellence. The 'postmodernity' of SF dealing with virtual worlds has been criticized by E. McCallum (2000), who has demonstrated its reliance on real world locations and on stereotypical adventure plots in her paper 'Mapping the Real in Cyberfiction'.

B. Westphal (2011) provides an extensive review of previous studies on space in *Geocriticism: Real and Fictional Spaces*. Solidly building on his academic predecessors, but moving away from philosophical reflections, he has suggested a new approach on space: geocriticism, a focus on space itself, using a defined methodology. It is the development of a methodology that sets his approach apart from the previous scholarship. As this approach is still very new, it is not without its issues and remains under constant revision and development. Robert Tally, Westphal's translator, has since adopted the term 'geocriticism', and has edited a recent collection of contributions from a number of scholars, including Westphal himself (2011).

The geocritical methodology, as put forward by Westphal, can be summarized in four principles. First, multifocalisation demands multiple viewpoints on the space or place of interest, rather than a single perspective. Geocriticism also encourages exploration of borders and the interface between literature and the margins, rather than simply the 'canon' of literature, while acknowledging that a methodological problem arises from a wide

distribution of sources. Westphal suggests that a potentially interdisciplinary approach might be attainable by examination of mimetic art such as cinema, photography, painting, and, notably, he mentions computer graphics. Second, polysensoriality emphasizes the importance of senses additional to seeing in the experience of an environment. While the visual sense is important, we also receive feedback from our environment by means of sound, smell, touch and taste. Westphal argues that while sight and hearing are remote, cerebral senses, which put us at a distance with regard to the environment, smell, touch and taste are intimate and bodily senses, bringing us to a close contact with the space. Third, stratigraphy requires an archaeological/historical dimension to the geocritical analysis, arguing that perception of space is also dependent on the impact of time. Any space may be viewed differently depending on its historical context, and the views are likely to change over time. Intertextuality, the fourth principle, acts in close co-operation with the other three.

Westphal argues that geocriticism can only be applied to geographical places and spaces. He prefers studies of specific places, such as cities, to general ones such as 'the desert', which, he suggests, might serve as a theoretical framework for more specific studies. This thesis suggests that geocriticism can also be applied to the study of virtual spaces. Westphal himself suggests that geocriticism can be applied to imaginary places, in the domain of science fiction:

> At the interface between the real and imaginary, derealized mythic elements can capture a poorly mapped […] space and are deployed in territories properly explored by science fiction. Going there is not all that different from going to the spaces of this world: some places are provided with a geographical referent that can be reduced to eventual representation, while others have been invented from whole cloth or derive in some cases from exclusively intertextual sources. (2011: 118)

He goes on to suggest, with some levity, that a geocritical analysis of the moon or Mars is conceivable, but that the principle of multifocalization would have to wait for first texts written on Martian paper or for films shot aboard spaceships. In the case of virtual space, the multifocalization requirement is fulfilled, not only by written texts about virtual space, but also by the ability to visit virtual space and its various realms, as well as by recorded material from there such as screenshots and videos. Crucially, Westphal notes that

geocriticism is a valid basis whenever a geocentred and multifocalized approach is conceivable. In this thesis, the focus will be on virtual space in the form of virtual worlds, perceived through a number of mutually influential texts over a thirty-year period, since the first appearance of such texts. It must be noted that due to restraints of technology, sensory input in virtual worlds is usually restricted to sight and sound, which makes the polysensorial principle in this case problematic.

Due to its co-operation with the visual representations, geocriticism also functions well with ekphrasis, with certain adaptations. Westphal suggests that natural applications for geocriticism are to be found in studies of artistic representations of geographical referents. This study expands to consider a range of ekphrastic representations of the same general category of space, like Westphal's example of 'the desert' as a non-specific space. The historical dimension of the principle of stratigraphy will also be applicable here, as this thesis will examine the effect of change in actual technological levels to the representation of virtual worlds.

It is striking that, as with ekphrasis, many of the relevant contributions on the subject of space are relatively recent. New critical outlooks may have been inspired by the rapid increase of the visual in the recent decades, as noted by Mitchell and Bolter, as well as by the emergence of new technology, and the consequent need to reassess the human space not only in the wider geographical space but also in relation to new technological spaces. At the same time, not much has been written about virtual space from the specific theoretical perspective of studies on space. M. Wertheim's (1999) ambitious general work, *The Pearly Gates of Cyberspace: A History of Space from Dante to the Internet,* which seeks to trace the history of the concept of space, is one of the few examples. In *Digital Sensations: Space, Identity, And Embodiment in Virtual Reality*, K. Hillis (1999) discusses virtual space in more detail, during the early days of the rapid expansion of the internet. It is also worth noting that J. Baudrillard's (1994) *Simulacra and Simulation* has occasionally been applied to the study on virtual space.

2. Building a virtual ekphrasis out of the changing Western word/image relationship

This chapter intends to examine the nature of the relationship between word and image at the core of ekphrasis. Specifically, its focus will be on whether the emergence of the digital has altered that relationship. Information, as text, and, increasingly, as still and moving image, is now accessible by the general public as never before in human history. Our current exposure to images exceeds that of any previous preliterate or literate society by far. Theorists such as Bolter have questioned whether our ability to 'read' images can match the speed of their constant impact. It is not only the number of images available that has undergone a process of change, but also their nature. Often, the digital image is not the customary still of a print photograph or an illustration on the page of a book. The defining feature of the digital image is that it incorporates movement in a new, inclusive, way. We have known the moving image since the final decade of the 19th century, but the medium of film has followed the model of still painting and sculpture in keeping its viewer strictly as an outsider. Whilst the viewer of a film may be intensely immersed in the events on the screen, at the same time he/she remains a voyeur: unable to affect the events of the plot or to have any kind of role in the visual presentation. Traditionally, theorists of the visual, such as Lessing, Mitchell and Heffernan, have allocated the roles in the process of gazing in a dualistic way: the viewer is the active party, who controls the passive object of the gaze by the gaze itself. However, this thesis would ask, where is the activity in the isolated observation from a distance and in the inability to have an effect on the object of the gaze? When this effect becomes possible in the interactive nature of the digital image, the 'security' of this illusionary power over the object of the gaze shatters. The interactivity of the digital image invites contribution from the viewer, to a greater or lesser degree.

The digital image mutates under the controls of hardware and software. It embraces text in unsettling ways by using text as parts of itself, or allowing itself to be used by parts of text. The extreme manifestation of the digital image is a virtual environment, which consists of computer-generated graphics. A virtual world allows the viewer to enter the image and to become part of it. The 'ekphrastic fear' of the image and reality merging, as suggested by Mitchell, seems to have suddenly become very close to actualising. If digital media appears to allow the image a much greater claim in the battle for supremacy, we may consequently

ask what position is left for the word. Further, what might all this mean for ekphrasis, the 'verbal representation of a visual representation', as Heffernan defined it? Theorists such as Mitchell and Krieger have treated ekphrasis and its handling of image as the 'other' of the text, but, as noted, digital image seems to have the potential, at least, to have the self and the other approach one another, if not actually merge. Digital image may have great significance in studies of ekphrasis, which is why it seems peculiar that ekphrasis, in the digital context, has only received very little attention.

This chapter will begin by summarising the traditional Western view on the relationship between word and image, followed by the introduction of the digital aspect into this relationship. Since this thesis focuses on virtual worlds as examples of digital graphics, next, main theories of the virtual will be presented together with a discussion on definition and vocabulary of virtual worlds. Subsequently, the discussion will move on to the definition and key elements of ekphrasis, as understood in this thesis. The concepts of immersion, affect and inspiration will be explored here specifically in relation to ekphrasis. It will be suggested that, in an effective ekphrasis, the reader holds a key role together with the viewer/writer, and therefore this section will also bring into discussion elements of the reader-response theory. The following section will take a new step in the development of ekphrasis and word/image studies by asking what happens when image becomes space. Virtual worlds allow the viewer to enter them and move around illusionary spatial locations. In discussions of virtual worlds, terms of location are typically used. In order to address this spatial aspect of virtual worlds, this section considers how elements from the framework of geocriticism can be drawn into the overall discussion. The final section will set out some practical methodological considerations in discussing how virtual worlds are represented in texts.

As seen from above, theoretical study of ekphrasis in the digital context is far from being straightforward. As the study of the digital world involves a great deal of unexplored territory, particularly in literary studies and specifically in terms of ekphrasis, elements from several frameworks outside the usual 'canon' of ekphrastic studies need to be brought in. This thesis proposes that the digital image is sufficiently different from the traditional

image to require adjustment of existing theoretical directions, even as this new discourse can, and should, be firmly built on those previously established foundations.

2.1 Word and image from Lessing to the arrival of the digital

In his 1766 work, which went on to become a cornerstone in the Western studies on the relationship between word and image, G.E. Lessing (2009) argues that words are best suited for representing other words, images to represent images, and that, on no account, should the two be mixed. A visual depiction cannot duplicate speech, nor can a text imitate a picture. Therefore, Lessing feels, any kind of attempts of one to represent the other would be not only pointless, but also wrong. He claims to be reacting against the critics of his own time, who followed the principle of Simonides on painting and poetry as comparable modes of representation and evaluable in equal terms, i.e. the principle of *ut pictura poesis*, which had held a dominant position in art history and art criticism for a long time. Lessing laments that the equation of the two has led to 'the love of description in poetry and allegory in painting' (p. xvi). In his view, poetry has been reduced to speaking painting that does not know what it could or should paint, and painting to a mute poem, separated from its purpose and thus turned into 'an arbitrary method of writing' (p. xvi).

The principle took its name from a poem by the Classical poet Horace. In another Classical text, *Cratylus*, Plato has Socrates compare the creation of a word to the visual work of an artist, even as he states that there can be no perfect imitation of an object by its verbal signifier. Towards the end of the dialogue, Socrates seems to reject the study of names (and words) in favour of studying that which words represent – i.e. he expresses a certain preference over the visual over the verbal. During the Renaissance, the superiority of the visual art over other art forms was argued by Leonardo da Vinci, whose influence persisted for centuries afterwards. In the early 18th-century France, Abbé Jean Baptiste du Bos, in his analyses of different modes of representations, preferred visual art over poetry, due to the former addressing its audience through the visual sense which, he held, enabled the most emotional effect (Mikkonen 2005). Further, he argues, painting uses natural rather than artificial signs, which increases understanding and clarity. In England, at the same time, Joseph Addison emphasized pictorial realism and the mimetic faithfulness of art. Poetic

language was to be directly transferable to painted images. K. Mikkonen (2005) observes that at this time, the reader was equated with the viewer. As will be seen below, the later tradition separated the reader and the viewer, and, in the case of ekphrasis, equated the viewer and the writer.

Lessing was not the first to separate the visual and the verbal, nor the first to express preference of the verbal over the visual. James Harris (cited in Mikkonen 2005) felt that poetry was better suited for expressing emotion and representing time than painting. Hence, he considered poetry superior. In 1756, Edward Burke (1990) emphasized the importance of imagination, which begins its work when the sensory input encountered is not too precise or material, i.e. visual. Burke argues that the reader is more efficiently captivated in circumstances of a certain unclarity, involving a sense of danger and unknowing. Poetry enables vision in the mind's eye, rather than in pictures. In this respect, Burke was closer to the concept of ekphrasis in its original Classical form than most of the literary scholars of ekphrasis of the modern day.

Lessing explains what he sees as fundamental differences between the written word and the image based on his interpretations of various 'natural laws'. The most basic difference between the two, on which he builds everything else, is the equation of the element of time with literature, and the element of space with the visual arts. In literature, a temporal sequence takes place through the narration of events and through the linear process of the reading. Visual art consists of material shapes in space and their relationship to each other. Lessing argues that, unlike text, visual art can be perceived immediately, that is to say, without the temporal element. Text, on the other hand, delivers details one by one, and by the time it is finished, the reader has forgotten the first detail, which makes the formation of a mental picture from words very difficult. Further, he notes, it is difficult to retain verbal details, while an object can be regarded over and over again. The conflict between word and image even had a political dimension. The visual arts have an effect upon the 'national character', Lessing warns. Further, he emphasizes the imagination-inspiring power of images on individuals by suggesting that mothers of ancient heroes, having gazed on divine images bearing serpents during the day, dreamt of them at night, and hence the stories of their conception of heroes by serpents came into being.

Mitchell's 1984 essay on *Laocoon* deconstructs Lessing's treatise and traces the origin of its conclusions to political and personal values. Mitchell points out that there would be no need to argue that visual arts and writing *should* not be mixed, if they *could* not be mixed. Rather than discussing any unchangeable foundational limits, Lessing is, throughout his work, expressing a preference. According to Mitchell, Lessing uses this preference to speak up against French intellectualism in favour of German and English ideas. Such political opposition is also anti-Catholic, mounted by two mostly Protestant countries, and, more broadly, anti-religious. Opposition to 'symbolic representations' as present in visual art inspired by religion runs through Lessing's work, as evidenced here:

> […] we should discriminate and call only those works of art which are the handiwork of the artist purely as artist […]. All the rest, all that show an evident religious tendency, are unworthy to be called works of art. In them art was not working for her own sake, but was simply the tool of Religion, having symbolic representation forced upon her with more regard to their significance than their beauty. (2009: 63)

Lessing approves of the destruction of ancient works with symbolic elements by iconoclasts. He suggests that the only proper function for art is to represent beauty, specifically the beauty of spatial bodies. Any symbolic or spiritual significance should, according to him, be left for the written word. A symbolic image is dangerous: it can influence not only individuals, but entire Churches and nations.

Mitchell (1984: 109) demonstrates that Lessing's thinking is strictly divided into two mutually opposing streams:

Painting	*Poetry*
Space	Time
Natural signs	Arbitrary or man-made signs
Narrow sphere	Infinite range
Imitation	Expression
Body	Mind
External	Internal
Silent	Eloquent
Beauty	Sublimity
Eye	Ear
Feminine	Masculine

The dualistic division is valorized in favour of poetry and its supposed attributes. Mitchell suggests that Lessing's perception of gender lies at the deepest core of his work: that paintings, like women, should be silent and beautiful, intended for pleasing observation of their 'spatial' bodily virtues, while poetry belongs to the realm of actualizing potential, outgoing expression, history, and masculinity. This division is supported by the separation of the artforms, while their blurring leads to confusion, chaos and breaking of the established norms. Mitchell observes that Lessing was, most likely, influenced in his dualistic thought by Burke's essay on the sublime and beautiful, which connects poetry/sublime/masculinity and painting/beauty/femininity.

Lessing's apparently rationalized iconophobia deeply penetrated the Western intellectual discourse on word and image. D. E. Wellbery (1984) has suggested that Lessing's treatise is still located at the heart of comparative analysis in the arts, theory of narrative, and negative semiotics, visual expression of negatives or metaphors. In this thesis, Lessing's relevance lies in this background he established for the study of word and image. He assigned negativized attributes – not overly negative in themselves, but presented in the negative light next to the more positive examples – to the image and focused on its supposed captivating, dangerous power. This was particularly linked to the feminized element of the visual and became the source of a number of issues relating to gender. The development of the concept of the image as more 'primitive' and 'less complicated' than the word begins around this time, in the works of Lessing, Burke, Harris and others. As documented by S. McCloud (1994) in his works about theories of comics and graphic novels, up to very recently, academic studies and even popular culture in the English-speaking world have been strongly prejudiced against bringing together word and image. Any illustrated or otherwise image-heavy literary works have been regarded as the domain of immature readers, language learners or those with linguistic difficulties. This thesis suggests that this prejudice against the image has also affected the study of digital graphics and their interaction with text.

As part of the discourse on theories of different art forms, the visual sense and the theoretical process of looking have interested scholars as long as word and image have been debated. Leonardo wrote that 'he who loses his sight abandons his soul in a dark prison'

(cited in Mikkonen 2005: 118). Enlightenment philosophers considered vision and seeing to occupy a special position in the pursuit of knowledge, to the point that metaphors of seeing and light gave a name to the entire era (Jay 1993). Lessing connected the eye and its function to the visuals, the 'inferior'. At the same time, Lessing's work, and that of others following him, has attributed a superstitious power to the process of the gaze. This may have been inspired by stories of Antiquity, in which gazing on that which was forbidden to look at, such as monsters like Medusa, could kill or turn people into stone.

Studies of ekphrasis, such as those by Heffernan and Mitchell, have tended to adopt the gendered approach to the gaze. According to it, the male viewer envoices the feminized object of the gaze by means of his writing. The fascination with the object of the gaze and the danger associated with gazing have become intertwined. Blanchot writes that the process of seeing becomes a kind of touch over the distance of the gaze, in place of a real, physical, touch. This touch, or contact, at a distance is the impression of the image. The fascination caused by this is passion for the image. The object seen 'does not belong to the world of reality, but to the indeterminate milieu of fascination' (1982: 32). Blanchot means that the psychological perception created in the mind differs from the 'objective' reality because it is infused with the viewer's own passions and needs. Most traditional theories on the gaze and the visual can be interpreted and summarized in the following manner: the gaze, the means of control and the ultimate power, keeps the viewer away from, outside, the image, which exerts dangerous and captivating power in a struggle against the viewer. In order to maintain the superior position 'in control', the viewer stays at 'a critical distance' rather than becoming immersed in the image with his/her personal passions, abandoning the critical perspective. This presents an obvious challenge to the study of virtual worlds which require the viewer 'entering' the image and essentially becoming part of it.

The growing interest in visual/textual studies and in ekphrasis, as outlined in Chapter 1, has helped to rehabilitate the image. The interest in the study of the image has been spurred by the rapidly increasing visual nature of our current society, observed by many commentators such as E. H. Gombrich (1982), Mitchell (1994) and Bolter (1996 and 2001). In his 1994 work, Mitchell coined the concept of a 'pictorial turn', a new interest in the visual in the

public culture and in academic discourse. He notes that 'cybernetic' technology has created new forms of visuality with significant power upon the spectator. As seen above in the works of Lessing and his colleagues, the power of the visual on the spectator is nothing new. One of the central concepts to Mitchell's 'pictorial turn' is the realization that a picture presents 'a complex interplay between visuality, apparatus, institutions, discourse, bodies and figurality', which, at the time, meant the discovery that spectatorship could be considered at least as complex an issue as reading (Mitchell, 1994: 16). He connects the pictorial turn to a number of European philosophers such as Wittgenstein, Derrida and the Frankfurt School, noting that the fascination with the visual is mixed with unease, or outright fear. Mitchell writes:

> [W]e still do not know exactly what pictures are, what their relation to language is, how they operate on observers and on the world, how their history is to be understood, and what is to be done with or about them. (1994: 13)

This is a remarkable turnaround from the previous theorists, who set image directly opposed to word, attributed space to image as its element and considered beauty and appeal to emotions its primary functions. With the arrival and development of mass media, it can be safely said that displaying beauty is in no way the primary purpose of the image – if, indeed, it ever was. In mass media, image has been appropriated for the use of information dissemination, commercialism, propaganda, terror and counter-terrorism.

Significantly for the current study, Mitchell also considers the prospect of the merging of the visual and the textual. He illustrates this by an example from an old radio programme, the presenters of which were in the habit of looking at pictures in the studio and expressing a wish that the listeners could see them as well. By verbally re-creating the visual images in their conversation in order to enable the listeners to see them in their mind's eye, the presenters engage in an act of producing ekphrasis. Mitchell outlines three stages of this ekphrastic process. The first stage he names ekphrastic indifference: a belief that words and images are fully separate and attempting to represent one with the other is largely pointless. The second stage, ekphrastic hope, is the encouragement that words and image may use certain techniques to approach each other. The third stage, ekphrastic fear, expresses the disquiet born from the prospect that by means of words alone, the listeners of Mitchell's

radio might actually see the images in a concrete manner: that the visual and textual become one and the same. Mitchell effectively prioritizes human imagination over a straightforward visual depiction. If the verbal were able to fully reproduce the visual that it seeks to represent, there would be no function left for the verbal. It would be rendered obsolete, essentially non-existent. Likewise, no room would remain for imagination, as experiencing the visual in a text would no longer be a matter of a personal mental process of associations, familiarities and interpretations. In such circumstances, the visual would become invasive. To avoid this, Mitchell argues, the borders between the text and image must remain in place, and the two must treat each other as rivals and 'others'.

As we have seen, the image is perceived as dangerous, or, at the very least, powerful and worthy of caution. If this is the case, why is it so attractive? Although Blanchot explains the desire for an image with the viewer's distance for it, he does not fully elaborate on what arouses the initial fascination in the first place. Krieger (1992) addresses the question by linking ekphrasis with a semiotic desire to the general preference of the visual over the verbal. Manifesting as an 'ekphrastic impulse', this semiotic urge strives towards what Krieger calls a 'natural sign', a theoretical (and impossible) sign which is that which it represents. A word for 'apple' would be represented by an actual apple. An actual physical apple is understood far more quickly than the word 'apple', even by a native speaker. The verbal always, inevitably, mediates the visual. If such a natural sign existed, representation would become meaningless. Histories, fiction and visual artistic representations would effectively cease to exist. Consequently, word and image must remain separate.

The attractiveness of the visual and the theoretical desire for a natural sign are well demonstrated by shifting practices in the digital media. The visuality of today's internet does not simply manifest in virtual worlds. Bolter has suggested that new media provides for a reversed ekphrasis of sorts. Using examples from traditional and new media, he proposes that rather than words striving to represent images, images are now used to represent words. Bolter's argument is supported by what might be termed 'legacy iconography'. A decreasing number of users today know why the sign for 'save file' in the Windows operating system is a dark rectangle with a smaller white rectangle and a white dot inside it, having never seen a floppy disk. Original representation of the command in

terms of appropriate technology approaches Krieger's desire for the natural sign very closely. As technology has moved on, the sign has transformed from its original signification to a representation of an idea, an action. These graphic signs for actions and commands, known as 'icons' are omnipresent on most modern operating systems and in most virtual worlds.

Related to the development of technology is the fact that the increased overall visuality acts as a status symbol. Since first becoming available to the general public in the beginning of the 1990s, the internet has become a household essential, comparable to the television or the telephone. This has enabled the growth of computer processors and the bandwidth required for transfer of data, which, for their part, have made possible the handling of more and more complex graphics. In the beginning, everything was based on simple ASCII text. Later, simple 9-bit graphics appeared. Later still, more complex graphics and digital photography became possible. In the area of games, a drive for more and more complex and believable graphics has continued up to today. Even operating systems seem to signify their development in terms of graphics. Having started out as pure text, operating systems have steadily increased their graphics to text ratio. Today, icons are dominant in market leaders such as Windows and Mac OS. Across the board, the digital image has come to signify progress, top of the line. This is in remarkable contrast to the traditional Lessingean notion of the image as inferior and more primitive. This thesis suggests that virtual worlds are the 'peak' of digital graphics, not necessarily in terms of some subjective quality, but in expression. With their distinctive features and the great degree of interactivity and immersion, they have come to disrupt the existing theories of the relationship between word and image, like nothing else previously.

2.2 Theories and definitions of the computer-generated virtual

In the early 1990s, when most visions of virtual worlds still belonged to science fiction, Baudrillard (1994) condemned 'virtual' as the ultimate manifestation of his concept of 'simulacrum', a duplication constructed by mechanical means and hence obtained passively without effort. 'Virtual' was to be something unreal, a copy of the original, which would, in the end, replace the original, trapping the human element in the mechanical, inhuman hyperreal. Progressing from the television of the 1970s to computing technology of the 1980s and 1990s, Baudrillard sees the development of virtual reality as a choice made by the contemporary society, with no opportunity to turn back from the chosen path. Ryan (2001) offers a possible explanation for Baudrillard's teleological pessimism in her review of the various interpretations of the word 'virtual'. She suggests that his morose predictions should be read as a 'what if' scenario, an exaggerated warning or a thought exercise, rather than as his view of the inavoidable direction of reality. Ryan's interpretations of Baudrillard's work as questions such as 'Would we spend all our lives inside virtual reality, if it were perfectly realized?' and 'How would we tell the difference between simulation and reality?' have remained present in science fiction. One of the texts dealing with such issues, *Accelerando* by Charles Stross, envisions a future in which humans exist fragmented in layers of reality, as technology has allowed the 'instancing' of the human mind, memory and experience. Different instances of one human can exist simultaneously in a variety of virtual worlds and have entirely different experiences. A certain individualization inevitably takes place, until boundaries between a single self and a multiplicity of selves completely break down.

P. Lévy (1998), in contrast to Baudrillard's negative views, sees virtual as potential in his study *Becoming Virtual*. Central to his thesis is the concept of actualization, transformation of an idea towards new qualities. He suggests that there is a constant mutually feeding cycle between the virtual and the actual. Actualization involves the construction of a concrete solution to a particular need, while the process of virtualization involves returning from this solution to the original need in order to develop a better solution and to find other, related problems. As there is no limit on the number of possible actualizations of a virtual entity, the process creates a loop of constantly self-renewing potential, which becomes an essential

element of the creative process. Lévy argues that representations that can act upon the world arise from the mental contextualization of the actual and the virtual as potential. Hence, acceleration of the virtual does not mean the loss of sight of what is real. It should be simply considered as a productive increase of the creative/potential feedback loop of the virtual and the actual.

Among theorists of the virtual, Baudrillard and Lévy hold pole positions, one at either end of the positive/negative spectrum. While Baudrillard's criticism of the virtual as hyper-escapist acts as a warning against losing the sense of reality, particularly when read through Ryan's interpretation, this thesis finds Lévy's optimistic approach a more useful starting point. The process of ekphrasis involves creativity, inspiration and potential as some of its essential parts. Lévy's suggestion of the mutually influential cycle reoccurs in other relevant and related contexts, such as in geocriticism, and in the concept of ekphrastic dialogue between the viewer/experiencer and the artwork. Further, the latter is related to the reader-response theory as developed by W. Iser (1980, 1989, 1993) and R. Ingarden (1973). The idea of virtual as potential is central to Ingarden's and Iser's work. To Ingarden, the reader actualizes the text from an incomplete object into an aesthetic one by filling in gaps, based on the reader's personal experiences and knowledge. To Iser, the text's virtuality creates its fundamentally dynamic nature. The reader does not only fill in the gaps, but also actualizes the text further by imagining the depicted scenes, characters and events, and by spatializing the text itself. The reader's imagination takes on a key role in the process of reading, or receiving the story by other means. Ryan points out that this makes the text itself already a virtual object. This inherent virtuality is elevated to higher levels by digital technology.

If the text itself is already a virtualized and spatialized object, that is, a virtual world of sorts, what does that mean to the present enquiry about the representation of virtual worlds in texts? Certain texts discussed in this thesis explicitly demonstrate their awareness of themselves as virtual worlds in this textual sense. Stephenson's *Snow Crash* and Stross's *Halting State*, in particular, construct a multi-layered reading experience, in which the text itself follows certain conventions of virtual worlds. The reading experience becomes a metaleptic passage through several levels of textual worlds. Many virtual worlds of the

texts analyzed in this thesis take the form and function of a game. As Ryan (2004) has noted, computer games are particularly fertile ground for metalepsis. The functions of the virtual worlds represented in *Snow Crash, Halting State* and their ilk are either openly ludic, or have elements known from ludic environments. Whilst the Metaverse in *Snow Crash* is intended as an open virtual environment, rather than as a game, elements such as swordfighting and motorcycle chases easily evoke associations with computer games. By employing ludic themes and devices, these texts invite the reader to communicate with the texts on several levels.

Ryan (2001) suggests that the appeal of simulation and images is based on their unreal state: we enjoy them for the pleasure on the skill with which they were crafted, not *despite*, but *because* they are not the real thing. This is supported by some of the relevant fictional texts, which laud the lifelikeness of the best examples of digital graphics. Avatars and virtual environments need not be simulacra of actual creatures or places in the real world, but they need to appear as though they could represent a reality. This thesis suggests that this is one of the primary reasons that viewers, readers and listeners everywhere enjoy imaginary things. The knowledge that dragons, elves or vampires are unlikely to mount an attack in the actual day to day world frees the receiver of the story to appreciate the skill of the narrator in bringing the fictional creatures and places to life in their imagination.

Imagination, the virtual as potential and the experience of the story are inherently linked. Ryan's main interest in the virtual reality experience is to treat it as a new way of describing reader response. She transfers the concepts of immersion and interactivity from technology to the domain of literature and develops them into essential elements of a phenomenology of reading, or, significantly for this thesis, art experiencing. Her rationale for combining reader response and experience of art is rooted in her argument that a 'virtual' textual world requires the reader to engage in complex mental activity to produce a vivid mental picture of this world. She proposes to read virtual reality as a metaphor for 'total art', for the fullest artistic experience. In ideal circumstances, the experience of 'total art' would involve all the senses, not only the vision, as with the visual arts, or the hearing, as with music. For the moment, virtual worlds are not able to provide such an experience due to the limits of existing technology, but multisensory virtual spaces have been

imagined in texts such as *Accelerando* or Diane Duane's *Omnitopia Dawn* (2010). Ryan references the 'Feelies' in Huxley's *Brave New World*, multisensory stimuli, which present a warning that such art would diminish the ability for mental critique and render imagination obsolete. As she demonstrates, the very same objections have been levelled towards all kinds of digital material time and time again.

2.3 Terminology of virtual worlds

Asking the question 'What are virtual worlds?' easily feels redundant in 2014. Surely, with tens of millions of people spending several hours each week in online worlds, we should be able to relate to these artificial environments as we would to any other (new) media. Yet, even the first glance at terminology shows that understanding of virtual worlds is fragmented. In his introduction to *Synthetic Worlds*, E. Castronova (2005) dedicates an appendix to his reservations about the term 'virtual'. He argues that the stalled technological research into simulating sensory input by means of goggles, gloves and other wearable devices – standard material for science fiction since the 1980s – has fallen by the wayside in favour of mentally and emotionally engaging software such as online games. Instead of gifting us the full-body technological immersion that the visioneers of the previous decades kept promising, virtual worlds have developed into complex, graphical environments on computer screens. The term 'virtual', Castronova points out, technically refers to the earlier VR paradigm, concerning goggles and simulated sensory input. Further, in his opinion, the philosophical connotations of the term 'virtual', such as those discussed by Baudrillard and Lévy, are problematic. As Ryan has demonstrated, the word 'virtual' can apply to any immersive or theoretically conceivable environment, even the text in an ordinary paper book. While Castronova uses terms such as 'practical virtual reality', his preference is to refer to these artificial environments as 'synthetic'. In his view, true virtual reality does not exist and has never done so.

Castronova's point is well made. However, his term of preference has not stuck, which makes it difficult to adopt it into another study. A humanities study into technology of any kind suffers from large amounts of associated jargon, much of which tends to be only understandable to the specialists of the topic. This creates difficulties for a broader

discourse. Although access to the internet in general and to the online worlds in particular has been constantly widening, to the point that playing online games is starting to be considered a mainstream hobby, rather than merely the niche domain of a 'geekish' fringe, it does not mean that the relevant language, jargon or slang, becomes easily understandable. This is particularly an issue in the examples of fiction considered in this study. Some authors have solved the problem by inventing their own neologisms, so that the jargon presents equal difficulties to everyone. However, readers who spend more time online are still likely to figure out the terminology sooner than someone whose interests lie mainly offline. Other authors have simply incorporated the present-day gamer slang, sometimes using the motif of a novice (usually female) in order to explain the terminology to the reader. Because of the difficulty of jargon, this study considers it important to use terminology that is as widely used and understood as possible.

'Virtual' is also problematic because, as Castronova hints, our contemporary virtual worlds tend to be ludic. These game-focused virtual worlds are in today's parlance simply known as 'online games' or 'online role-playing games'. *Second Life*, inspired by Stephenson's *Snow Crash*, is a Metaverse-like open environment with plenty of freedom for its avatars, but today it mostly remains of interest only to academics, educational institutions and some artists. The public and commercial interest is firmly focused on online games. In fiction, the virtual worlds represented are increasingly, although not solely, also ludic in nature. Further, as will be seen in subsequent chapters, the trend in fiction representing the digital is beginning to shift away from full or partial immersion in secondary (synthetic/virtual) worlds and towards augmented or artificial reality (AR) the overlaying of digital information or graphics on the real world field of vision.

Another option at our disposal is the term 'digital', or the oft-synonymously used 'electronic'. These two terms are typically used in parallel to refer to certain computer-generated textual and graphical works of art, which can appear as self-contained brief installations, or as lengthy hypertexts, short paragraphs of text linked together and dependant on the reader's choice of progress. This type of 'digital' or 'electronic' literature has attained a relatively lot of academic interest since its beginnings. The term 'digital' is also more broadly used in context of 'digital humanities', the recent paradigmatic turn in

the humanities struggling to maintain a high profile in the face of scientific and technological research. Interestingly, IT specialists themselves rarely seem to use the word 'digital'. Its use by non-technologists seems to have connotations of otherness and attempts at trendiness. For the current purpose, the term 'digital/electronic', then, is either too specific (in terms of electronic literature) or too broad (digital humanities, etc.).

As most virtual worlds today are situated on the internet, the term 'online' becomes an attractive option. It is, by far, the most common term used in today's society to refer to games, environments, social networking sites, music and film services, and the like. Many games have this term in their titles, such as *EVE Online* and *Lord of the Rings Online*. Yet the term 'online world' is not in any way common use, despite its simplicity and apparent clarity. This may be because of the predominance of ludic worlds, with their own established terminology, as noted above. There is no need to refer to 'online worlds' because most such examples are already termed as 'online games'. Nonetheless, the fact remains (for now) that a virtual world could theoretically also exist without an internet connection and thus not be 'online' in the current sense of the term. However, such a world supported only by a single offline machine or a small network of connected machines could not sustain a large number of users or any great infrastructural complexity. As the number of players and the complexity of the simulation and interaction increases, there is an inevitable move towards a distributed system with components of the virtual world server on multiple separate machines. As this study is not primarily concerned with existing technology and its virtual world applications, but, rather, it focuses on notional virtual worlds in fiction, it would be inadvisable to limit the terminology to the current or projected developments of actual technology. 'Online' is a very strong contender for the best term to use, but some of the texts discussed in this study do not use what we would recognize as 'online' technology as such.

Other potentially available terms – secondary worlds, artificial worlds – also suffer from the issue of broadness. The term 'secondary world' is sometimes applied to fantasy fiction, which imagines other worlds, assumed to be as real as our own world, but typically with no connection to the latter. The term 'secondary world' was coined by J.R.R. Tolkien (1947) to denote a consistent fictional world, as opposed to reality, the primary world. Similarly, if

children call forth a 'let's pretend'-world and interact within it, or a group of friends come together to play a role-playing game in an imaginary world, neither of these is in any way tangible or perceivable in any other way except in the participants' imagination. Yet, semantically, that world is no less secondary, artificial, or indeed virtual, than one generated by means of computer code. If we are to consider specifically computer-generated environments, designed to appeal to the human user's senses, as well as to psychology, in a manner as tangible as possible, we need to apply a relatively exclusive terminology that is also descriptive and understandable.

Due to the modern sense of 'virtual' as simply pertaining to something that is computer-generated, this study somewhat reluctantly adopts it as the term of choice, while remaining aware of its issues. None of the terms discussed above are perfect, which reflects the recent arrival of this topic to any kind of discourse. Immersive computer-generated environments will, consequently, be called 'virtual worlds'. This study will retain the term 'online games' to refer to relevant games played on the internet, virtual worlds with a primarily ludic purpose and mechanics. It will also use the term 'MMO' or 'MMORPG' to refer to massively multiplayer online (role-playing) games. It will occasionally use the term 'digital' to refer to graphics generated by a computer, or to literary works primarily designed to be read by means of a computer.

Having established the base terminology, let us now consider what we mean when we talk about virtual worlds in the current study. A virtual world is an artificial computer-generated environment, constructed by one or more individuals by means of programming code. A virtual world can be fully text-based, such as the ludic MUDs (multi-user dungeons) or MOOs (MUD, object oriented) of the 1990s. In fiction, and in the perception of most people, a virtual world tends, however, to be fully graphical. As will be seen in subsequent chapters, together with the development of computer graphics in the real world, fictional representations of virtual world 'landscapes' have moved from the abstract geometry of Gibson's cyberspace to varied, realistic landforms. Different landscapes, from cities to oceans and from mountains to forests, are represented, typically, in an 'abbreviated' fashion. Three 'houses' may stand for a village, and a few cultivated 'fields' for extensive farmland. The size and proportions of landscape depend on the overall size and complexity

of the virtual world. Further, the world is likely to contain objects, with which it is possible for the user to interact. In the current state of technology, it is not possible to 'feel' or 'smell' or 'taste' such objects. For the moment, vision and hearing are the primary senses employed in the experience of a virtual world, with the kinetic sense present to some degree.

A virtual world is accessible by one or more users. In much of the more recent relevant fiction, and also in our contemporary reality, the user logging in to a virtual world assumes an avatar, a graphical representation of her/himself. This avatar is most typically put together from a selection of available models: hairstyles, body shapes, colours of skin/hair/eyes, adornment. The intention is for the user to express their individuality. This is also reflected in the clothing options available for the avatar throughout their 'career' in the virtual world. Most users embrace these possibilities and go to considerable lengths for the sake of aesthetics or as expressions of power and/or individuality. An illusion of place is created, within which the avatar of the user can move relatively freely. Unless the avatar has special abilities, it cannot generally pass through what are considered as 'solid' objects – walls, trees, cliffs. The avatar can also interact with the environment and the avatars of other users, to a greater or lesser degree. Some virtual worlds allow the avatar to pass through other avatars for greater convenience, others make a point about this not being possible. Ludic virtual worlds often refer to the avatars as 'characters'. The avatars/characters are typically labelled with name tags. The user may (rarely) use his/her own name, although more typically, an assumed name is used. This is for reasons of security as well as in order to follow the general flavour of the setting. A virtual world often also contains graphical 'dummies', automated creations made to resemble the avatars, but with limited interaction. These have been known by many terms, such as 'daemon' in *Snow Crash* and NPC (non-player character) in most real-life online games.

The user cannot access the virtual world without technological equipment. The need for technology in accessing a virtual world defines the artificial environment. In a literary text, the motif of technology distinguishes virtual worlds from fairy tale or fantasy worlds or other mystical otherworlds. At the same time, virtual worlds strive for the kind of user experience that makes the user feel as though she/he were physically present in another

world. Both the simulated sensory input and strong engagement of the user by means of appealing to his/her emotions or interests in the story seek to do this by means of immersion. To Ryan, interactivity and immersion are key concepts within the study of the virtual. This thesis will follow this principle and will suggest that it is these two features that primarily set virtual worlds apart from other visual art.

When a user accesses a virtual world, by, for instance, logging in to the relevant server, she or he is said to 'enter' that world. A virtual world is conceived as a place. It is typically represented as a full named world, or part of one, which is subdivided into continents and smaller geographical and/or political units. These include different 'natural' landscapes as well as 'man-made' places such as cities. The user's avatar/character is able to visit these areas and specific places within some restrictions, such as to what in-game political faction the character may belong, or whether his or her power level is suitable for the area. The avatar may have to walk or ride to get to these places, to use some sort of a vehicle or public transport if it is available, or the avatar may use a special ability that allows a near-instantaneous transport to the desired location. In many virtual worlds users are able to construct dwellings or other personal areas for their avatars. These homes can become as much of an extension or representation of identity as the avatar, and, as such, a lot of personal attachment is placed upon housing. Virtual housing and its associated values have the potential to make an interesting study from the perspective of Bachelard's notions about emotional significance attached to the home and its different rooms. The virtual homes can often be furnished according to the user's tastes and they may contain special mementos of things that the user has done using the avatar, such as trophies and particular equipment. Ludic virtual worlds typically involve quests, which the avatar must perform. Some of these may be part of the game's overall narrative, if one is present, and other function simply to enable the character to progress in terms of power and equipment. Typical quests involve solving puzzles, combatting enemies and retrieving items. Much of typical game mechanics are indebted to tabletop roleplaying games such as *Dungeons & Dragons* (see Chapter 3).

A virtual world is inherently a social experience. Within virtual worlds, users can typically form groups ranging from parties of less than ten avatars to accomplish a particular goal to

formal organizations and alliances of these organizations. Although 'grouping' is not compulsory, most online games are designed to offer the best experience when several users work together towards the same goal. Interaction, one of the key elements of the virtual, takes place not only between the user and the environment, but also between the user and other users. Conversation takes place both in-character, with users sticking to the role-playing immersion, and out-of-character, with users breaking the immersion. Even ludic virtual worlds do not restrict this interaction solely to follow the framework of the overall game narrative. Besides going on quests, avatars may also engage in commerce, make friends, duel, compete, conduct romantic liaisons and sometimes even have sex. Most virtual worlds offer commands to use on the avatars to perform relevant gestures. When suitable gestures are not available, users may choose to represent the acts performed on the screen by simply typing it on the screen. Some virtual worlds even offer commands to simulate eating and drinking in order to increase immersion.

This lengthy introduction to the virtual worlds of the early 21st century has been necessary to contextualize the current topic. Studies on virtual worlds have tended to remain in academic fields other than Comparative Literature, with non-literary perspectives. The intention of this thesis is not to investigate the virtual worlds themselves, but rather their representations in print literature. It will therefore not be primarily dealing with existing virtual worlds, such as those mentioned above, but it will remain aware that much of the textual representations of virtual worlds is closely influenced by them. It will also bear in mind how much they have been influenced by fictional examples, hence the need for a good grounding on the basic terminology and features of virtual worlds, before progressing to the related literary analysis. This is even more essential in a discussion of the application of ekphrasis to computer-generated graphics, in the argument of this thesis that in such circumstances ekphrasis merits a new perspective.

2.4 Towards a virtual ekphrasis

While many of the major definitions of ekphrasis seem mutually contradictory, the Spitzerian-Kriegerian definition of ekphrasis as a description of a work of art conflicts less with the definitions of Heffernan (visual representation) or Webb (Classical rhetorical device), if we cautiously and broadly consider ekphrasis to refer to the evocative verbal rendering of a *significant* visual. Significance is added to a visual through human agency: an emotional connection. Geographical plains, in themselves, are not necessarily significant, but the plains on which a great battle was fought become significant through their historical and associated emotional values. Similarly, a naturally occurring tree may not hold any particular significance, but if it is invested with significance through its choice as the model of a painting or a sculpture as a result of inspiration, the crafted representation acquires significance. Any representation, be it of something real or something imagined, is brought into being for a reason. The speaker or writer of ekphrasis chooses to represent in words not something random or irrelevant, but a visual object or scene of significance to him or her. Inspired by the encounter with this visual, the viewer-turned-writer may then wish to transfer the powerful experience to others by verbal means, using ekphrasis. The role of the emotions is important: without an emotional connection, an inspiration would not take place and ekphrasis would not be written.

It is in these instances that the relevant textual passage moves beyond description towards evocation. The term 'evocation' is used in this thesis to denote a particular mode of writing intended to rouse emotions in the reader. Evocation may use ekphrasis as a textual device. Ekphrasis employs unnecessary details, similes and metaphors, as well as intertextual references to other works that the reader may have seen or read in order to draw effect from the reader's familiarity. It may also otherwise seek to trigger related associations or personal memories in the reader to increase the emotional response. The visual does not only occur in the vision but also in the mental landscape. When the reader responds emotionally to the text and is able to experience the remediated visual in his or her imagination, immersion has taken place. It is as though the reader is present with the original visual and experiencing that visual for him- or herself. If we consider that essential elements to ekphrasis are the emotionally charged significance of the original visual to the

original viewer and the subsequent production of immersion as means to re-create the original visual in the reader's imagination, it no longer matters whether the original visual was an art object or something else. The process for representing art objects and other visuals in an ekphrastic manner becomes the same. The viewer reacts emotionally to a visual, imbuing it with significance. Inspired by this, the viewer seeks to transfer the emotions to the reader by means of words. If this is successful, the reader (re-)imagines the visual in his or her imagination and is likewise emotionally moved.

We can, to a degree, compare the ekphrastic process to the cognitive linguistic approach to communication taken by Dan Sperber and Deirdre Wilson in their work *Relevance: Communication & Cognition* (1995). They suggest a relevance theory of communication, according to which human cognition tends to be oriented to the maximisation of relevance and every act of communication communicates a presumption of its own relevance. An important aspect of the theory relies on the concept of inferences: assumptions and phenomena. All these have the potential to lead to cognitive effects in an individual. For our purposes, we can note that in ekphrasis, the producer of the text provides inferences, the relevance of which is interpreted by the reader according to his or her own individual mental schemata. Ekphrasis makes use of poetic effects, a concept described by Sperber and Wilson as a 'peculiar effect of an utterance which achieves most of its relevance through a wide array of weak implicatures' (p.222). Although, from the linguistic perspective, the employment of poetic effects would, at first, appear to increase the cognitive effort required of the reader/listener (and would thus seem undesirable), poetic effects optimized for maximum relevance in fact reduce the listener's processing effort due to the fast cognitive connections created in the mind. Such an optimum effect takes place in ideal circumstances, but, in practice, if the listener's context is not (or cannot be) accurately gauged in advance, the poetic effects used may increase the listener's effort through misdirection or straight out confusion.

The context of the listener is, therefore, shown to occupy a key aspect in the ekphrastic process. Here, as per the definition of Sperber and Wilson, the term 'context' goes beyond the historical and societal 'reality' in which the listener belongs; it refers to the listener's own psychological construct of his or her 'world'. It includes expectations about the future,

beliefs or attitudes regarding religion and/or science, anecdotalized memories, general cultural assuptions and the listener's own attitude towards the speaker and to the speaker's mental state. A speaker/writer seeking to produce optimal relevance must make assumptions about the listener's/reader's cognitive abilities and, crucially, contextual resources, in choosing what to make explicit and what to make implicit. Implicitness requires the listener to 'fill in the gaps', using his or her contextual resources, with less cognitive effort than would be needed in the production of explicit communication. As ephrastic texts, in their search for emotional response, use a great deal of implicitness in inferences through poetic effects, the reader's context is of prime importance. The writer of an ekphrastic text is more easily able to take into account the expected audience's 'real' societal and cultural contexts than each individual's psychological context, as discussed above.

The difficulty inherent in the attempts to anticipate the readers' context(s) can be characterized in phenomenological terms: as Maurice Merleau-Ponty writes in *Phenomenology of Perception*, perception, being tied to the body and the bodily existence, is fundamentally an individualized concept, although it functions in connection with the perception of others. Through his or her own personal experience, each individual constructs a 'world' or, to return to our previous terminology, a 'context', of his or her own. To Merleau-Ponty, communication is created from a kind of demand that the other's perception experiences what one's own perception experiences. He points out that a failure of communication leads to the recognition that consciousnesses are separate. We can easily connect Merleau-Ponty's notion to ekphrasis: word 'demands' that what has been perceived, or experienced, by the writer, either notionally or in reality, is further experienced virtually by the perception of the reader, thus bringing the respective 'worlds' of the reader and the writer to closer contact. The virtual perception of the reader requires an effort of imagination. In discussing syntactic parallelism and parallel processing in the case of a partial semantic divergence, Sperber and Wilson observe that the listener has to bring together relatively unrelated entries and construct non-stereotypical assumptions. The same process operates in ekphrastic transfer, as the listener has to use imagination to construct (often apparently) unrelated connections.

The technical term 'relevance' in the theory of communication put forward by Sperber and Wilson mainly refers to relationships between utterances and interpretations. Outside strict linguistic context, we might attempt to explain it as 'information' or 'sufficient information' although such an explanation, at best, only scratches the surface of the term. We have, however, established above that the purpose of ekphrasis is primarily to relay affect, rather than information in the most commonly understood sense of the term. If we connect the linguistic term 'relevance' to our own term 'significance', specifically in the visual material evoked by ekphrasis, we can proceed towards a better understanding of the mechanics of the internal workings of ekphrasis in its dynamic between the writer, the original visual and the reader.

Due to the fact that most modern literary studies have argued for a visual art object to be an essential element of ekphrasis, such objects have received by far the most attention. Hence, even if the visual source of ekphrasis is less relevant as most previous scholarship would suggest, it is appropriate to focus on objects of visual art in terms of the definition suggested above, in order to engage in conversation with other researchers. The visual art object, fashioned by human hands, has significance by definition. Its value is primarily aesthetic, superseding any utilitarian functions it may have, and as such, the value is dependent on human psychology. It is prime material for symbolism and for layers of interpretation, intentional from the part of the artist, or, equally validly, unintentional, but arising from the interpretation of the viewer. Stylistically, an evocative description of a single object easily stands aparts from the rest of the text, leading to Krieger's assessment that the function of ekphrasis is to bring the narrative to a momentary contemplative standstill. No wonder, then, that the ekphrasis of material art objects has acquired and retained the academic spotlight, even in the face of the various other applications of ekphrasis proposed in the recent years, such as those dealing with music and film, as outlined in Chapter 1. Perhaps because the study of ekphrasis appears to be so fundamentally rooted in the Spitzerian notions of descriptions of visual art, the diverging contributions of Persin, Clüver, Bruhn or Eidt seem to have been picked up by relatively few scholars in order to develop them further or to apply their suggestions to new studies of poetics.

In order to discuss representations of digital graphics in holistic, experiential terms, we must briefly consider the nature of experience itself, and how it might translate to a virtual environment. In a paper in the online journal *CLCWeb*, Serge Bouchardon and Asunción López-Varela (2011) write,

> Representation can be contemplated as a continuum of increasing depths of immersion, ranging from a temporary suspension of disbelief in traditional fiction and television, through a deeper immersion in a role-playing computer game to a full simulation of an unreal world experienced as if directly through sense perception, but in fact through the wiring of a headset. In all cases the experience, whether factual or fictional, is felt in the same way because several modalities — the material, the sensorial, the spatiotemporal and the semiotic — are combined in a process that produces the effect of authenticity. (p.4)

The authors make a direct connection between the concept of representation and the concept of immersion, both of which are of concern to us in this thesis. The experience of immersion — the illusionary sensation of being in another space — is shown to be at the heart of representation. Further, importantly, the experience is observed to arouse the same kind of feelings regardless of its 'real' or 'unreal' status, due to a number of factors contributing to the experience in both cases. An experience is constructed of multisensory, spatial, temporal and semiotic elements, interpreted by each individual. The experience can be re-created as ideas and feelings through external objects of significance, connecting distinct spatio-temporal levels.

As any experience is fundamentally defined by the individual undergoing the experience, equally, an (immersive/representational) experience remediated by text, as in the case of ekphrasis, inevitably loses the individual quantity of the writer, and acquires the individual quantity of the reader. The experience is re-imagined by the reader according to his or her own cognitive schema. The reader virtually constructs another 'space' for her- or himself as per the guiding offered by the text. While that 'space' of immersion is necessarily individualized, certain elements of 'mutuality' of world experiences, as termed by Merleau-Ponty, mean that experiences can be shared with others. As Bouchardon and López-Varela point out, neuroscientists speak of 'body schema' and 'body image' forged in a dialogue with our life perceptions, social world, and actions. A subject needs others to signify at all.

Merleau-Ponty writes that although each individual experiences their own 'world' in their own way, the fact that we live in a society in which individuals experience things in a *similar*, if not *identical* way, means that a mutuality of experiences can be established, compared and shared to a degree. An essential aspect of the mutuality is that, according to Merleau-Ponty, all perception is defined by the human corporeal existence, the human body, the body-subject (*corps-sujet*). He rejects the Cartesian mind-body division, the echoes of which we can see in Gibson's *Neuromancer* (see Ch. 4) and argues that existence (and, therefore, perception) takes place 'in-between' the mind and the body, which are in constant mutual communication. Experiences of the body create memories, emotions and volitions of the mind, which can be rekindled at the re-occurring of those experiences — and, similarly, the relevant cognitive functions may incite the relevant bodily experiences. We perceive our immediate environment and anticipate an environment or its aspects that we cannot see through our present or past bodily experiences.

Merleau-Ponty's ideas of perception and experience through the body are worth highlighting in our discussion of the virtual experience. With the exception of the cyberspace in *Neuromancer*, which is best described as a proto-virtual world, most fictional and non-fictional virtual worlds have tended to be created as virtual environments represented in terms that our corporeal existence can comprehend. In his extensive study about the construction of presence in 'illusion spaces', non-technological and technological virtual spaces, Oliver Grau (2003) writes that the goal of such spaces, giving the viewer the strongest possible impression of being in that other space, requires the most exact adaptation of illusionary information to the physiological disposition of the human senses. Grau notes that merely dealing with the visual sense is not enough, and that the fullest virtual experience must be achieved through the interplay of hard- and software elements to address as many senses as possible. Further, he observes that an important role in the immersive process lies in the avatar, the representation of the user's body, as the avatar is a vehicle for experiencing the virtual environment. Gray writes,

> 'The senses and communication systems of our flesh and blood bodies are able, via hard- and software interfaces, to enter into an exchange with all manner of simulated creatures. Incorporated in artificial bodies, which are, nevertheless, merely images, we may even experience certain evocative phenomena that influence our consciousness.' (p. 344)

We construct our virtual worlds to match the parametres of our bodies: the perception through the bodily movement, vision, hearing and the kinetic and haptic senses. Even if the concepts relating to touch can only be clumsily simulated in virtual worlds, our cognitive schema will still correctly interpret these occasions in terms of touch. Similarly, we are able to 'travel' in a virtual world because our cognitive functions interpret the virtual landscape in terms of distance, materiality and our relationship to objects in the landscape, non-physical as they may be in reality. Consequently, we can comprehend the concepts of 'walking', 'running', 'fighting', 'swimming' and even 'flying' in the virtual environment, despite these terms actually only denoting to functions created in the interplay between our desires and the functions of the controlling device (keyboard etc.) and the underlying programming code. We may even approach a virtual environment with no previous experience of them, or only very little, and once we are given the basic instructions on how to map such functions to our controlling device, the likelihood is that we quickly adapt to the situation, logically determining necessary actions in new situations. Citing the philosophers Berkeley and Kant, Merleau-Ponty suggests that our imagination and space are inextricably bound: we are only able to think of the world because we have already experienced it, and, based on that experience, an attempt to imagine that we are in an unfamiliar place already puts us present in that place. A place that cannot be perceived through the human bodily existence simply cannot be imagined. Therefore, ironically — and as we will see in the subsequent analytical chapters — any virtual (non-physical) world is ultimately defined by the physical world.

The non-physicality of virtual environments — virtual art — is an important difference in our discussion of the differences between traditional and virtual ekphrasis. Objects of traditional visual art such as painting and sculpture have two notable qualities which become evident only when compared with something that lacks them: tangibility, and its relation, physical presence. Most often, the modern ekphrastic text is presented as following the physical experience of the writer. He/she has viewed the object in a museum or a gallery, in which the object has been within reach and completely unreachable at the same time. The physical features, such as the traces of the brush or the chisel, are visible, and the viewer has been in close physical proximity to the object, intimately inhabiting the same space. As interactive galleries designed for children show, the desire to handle

beautiful and interesting objects within one's reach is a natural instinct. Yet, in most institutions touching of artworks is absolutely forbidden. Further, in an institutionalized environment, as observed by Heffernan, an art object is removed from its original context and the information presented to the viewer is regulated by the institution. Visual art becomes an entirely monosensory experience, as no other senses are allowed for its perception. This creates a distance, a disconnect, more frustrating to the viewer because it is artificial, enforced by the viewer's own reluctant obedience to the rules set by an external authority.

We might wonder if this kind of aesthetic morality is not at the heart of the supposed fear of images, as discussed above, and as shown to be present in contemporary society. Certainly, the paradoxical distance-within-presence and the frustrated wish for a physical touch manifests in the viewer's desire to 'possess' the object, which Heffernan interprets as gendered dynamics. He focuses on the active gaze (of a presumed male viewer) and the passive state of an object (of the presumed female nature of the artwork). If, instead, we choose to employ the analogue of refraining from physical touch due to the rules of an external authority, a tension similar to Heffernan's is explained without resorting to outdated gendered concepts. The viewer, desiring to touch but frustrated, may be male or female, as seen as in Moira Egan's poem 'Dear Mr Merrill' (2002).

> […] that perfect Hermes by Praxitelis,
> full lips, hips *contrapposto*. I wished to draw him
> down, latter-day Pygmalion, and embrace
> him. Or barring Eros (and the guards) I'd trace
>
> his face, the supple muscle of the marble.

The object of the gaze is a male statue, and while we may be inclined to see the speaker of the poem as an aspect of the female poet, there is no reason why the speaker should not be male, particularly as the speaker implies that the 'Mr Merrill' of the title of the poem may have been attracted to the statue as well. Previous ekphrastic studies have nearly exclusively focused on the presumed heterosexual male-female dynamics of the viewer and the object. Analysis of the female or homosexual gaze would offer a great deal of untapped potential, but it is beyond the scope of this thesis. Blanchot (1982: 32-3) explains the

passion for the image as resulting from the viewer's separation from it. Seeing something over a distance creates an encounter with the object of the gaze, and the gaze becomes a metaphorical touch for the fascinated, passionate viewer.

The above features of 'traditional' visual art – exclusive visuality, tangibility, physicality and separation from the viewer – are challenged, even displaced, by the new generation of visual art, generated by computers. Wider society has been slow to acknowledge computer graphics as art, perhaps due to the misperception that their creation requires no 'artistic' skill or because of their association with popular entertainment such as computer games. This attitude is, at long last, gradually changing. Aarseth (1997) has provided a useful discussion on computer games as art. In 2012, Smithsonian American Art Museum held a major exhibition titled 'The Art of Video Games'. The exhibition introduction called video games 'an amalgam of traditional art forms—painting, writing, sculpture, music, storytelling, cinematography' which 'offer artists a previously unprecedented method of communicating with and engaging audiences' (http://newsdesk.si.edu/releases/smithsonian-american-art-museum-presents-new-exhibition-art-video-games [Accessed 18 October 2014]). Computer graphics, which are, for the moment, mostly only viewed on the computer screen, have nonetheless already departed from traditional image/text or image/outside world dichotomies. Many visual art installations have made use of digital graphics. They also strongly feature in the very recent genre of electronic/digital literature. The existence of virtual worlds in the form of open environments such as *Second Life* and as the numerous MMOs is fully dependent on graphics that represent fictional worlds with numerous separate and distinct locations. Like film, computer images can incorporate the sense of hearing by cooperating with music; they can move and tell a story, but, unlike film, they can move in wholly non-realistic, non-mimetic ways (a man walking in the street may turn into a swirl of multi-coloured dust and vanish in a spiral), and, more importantly, they typically incorporate the viewer in some manner. While the former difference with film can be argued to be possible for animated films, interactivity is a definite hallmark of computer graphics.

Interactivity crucially reduces the viewer's separation from the visual object to the point of allowing the user to get into intimate contact with the visual. It can range from 'starting'

and 'ending' the artwork by means of the mouse cursor or other controls, to full participation, such as the user experiences in virtual worlds. In the latter, the user becomes a part of the artwork by assuming a role within it and by communicating with it, in order to socialise with others, to participate in a story, or perhaps for purposes of education. Regardless of the purpose of entering a virtual world, a multisensory experience is created by smooth interactivity combined with the believability of the graphics, freedom of movement to as great a degree as possible and the use of the sense of hearing in context of accompanying music, spoken narrative dialogue and/or voice over internet communication. Such an experience, engaging more than one sense, more easily leads to immersion. Here, in the encounter with the (digital) visual, the user experiences immersion *directly*. When the experience of an encounter with the visual is ekphrastically transferred in words, a successful immersion of the listener in the remediated experience is *indirect*.

Writing about virtual worlds and texts, Ryan (2001) defines immersion as an experience through which a fictional world acquires the presence of an autonomous, language-independent reality populated with live human beings. In order for a text to be immersive, it needs to create a space to which the reader/spectator can relate and populate it with individuated objects. Ryan suggests that the most immersive texts are often the most familiar ones, as difficult material hinders immersion. This argument is directly related to ekphrasis. Webb has demonstrated that in the Classical world, the rhetorical ekphrasis was primarily a psychological process. The rhetors, in seeking to create the desired visuals and the desired resulting emotional state in the listeners' imagination, essentially strove to create indirect immersion. They achieved this by appealing to the listeners' previous experiences, attitudes and other mental schemata. Even in this ancient version of the ekphrastic process, familiarity of the listeners was a key element.

Virtual worlds straddle theoretical frameworks between space and image. To write about virtual worlds is to write about immersion, which, as shown by Ryan and Murray, has a bad reputation in scholarship. Even in popular culture, immersion, particularly in the context of virtual worlds, easily carries connotations of childishness, at best, and, at worst, of addiction and loss of sense of the real and the imaginary. When notable atrocities such as mass shootings take place, the criminal's interest in video or online games is often brought

up as 'evidence' for his anti-social nature or delusional mental state. Such reporting ignores millions and millions of people engaged in similar hobbies who never commit a crime in their lives. In the academic climate, immersion has been seen as counter to critical thinking. In her listing of objections to academic considerations of immersion, Ryan includes the loss of critical faculties, passivity, resistance to theorization and association with popular culture. Bolter (2001: 155) accuses immersion of being 'virtual television', the goal of a naïve reader or one who reads for entertainment, particularly genre fiction such as romance or science fiction.

Bolter's elitist view excludes the element of pleasure from reading or narratives of any kind. It assumes 'popular' works cannot, or should not, be analyzed critically, although, due to their widespread nature, they are liable to communicate far more about the current culture than so-called 'literary fiction'. The current thesis, about a strongly theoretical concept, could not have been written without an analysis including 'popular' science fiction works, as it tends to be this area that most readily picks up on new ideas and technological developments, and treats them in a mutually influential cycle. The notion of 'passivity' regarding immersion mis-assumes two essential points: that imagination automatically reacts to stimuli without any effort from the viewer's/listener's/reader's/user's part, and, in the virtual context, the interactive nature of virtual immersive environments. These two are related. Ryan's counter-argument to the objections to immersion is that production of a vivid mental image requires complex mental activity, particularly when this mental image must be created from text, as indirect immersion.

Ryan leaves her argument vulnerable by not offering more detail or examples. However, if we accept that immersion and ekphrasis are related, we can use ekphrastic vocabulary to explain and expand from Ryan's attractive suggestion. Webb's demonstration of the psychological process of ekphrasis makes substantial demands of the writer/speaker of ekphrasis, who must anticipate the reader's expectations and previous experience, in order to be able to appeal to the reader's emotional and intellectual background sufficiently well to create the desired response. Similarly, demands are made of the reader, who must be prepared and able to connect this his/her background to the ekphrastic text in order to experience it fully. Thus, the reading process of ekphrasis becomes intertextual by

necessity: the reader must critically evaluate and make mental connections to his/her own relevant past experience, including other texts representing the same or related subject matter, and other visuals related to or similar to the original. This is particularly evident in the instances when the visual represented is notional, or otherwise something that the reader has not seen before, as suggested by Yacobi's (1995) notion of visual 'models' in ekphrasis. Therefore, the reader must provide relevant input from his/her own imagination to fill the gaps, as per Ingarden's and Iser's reader-response theories. Ekphrasis does not happen only in the mind of the viewer-writer but also, essentially, in the mind of the reader, and in the intersection between the two. This thesis proposes that the ekphrastic process requires a three-way communication between the original visual, the viewer-writer and the reader/listener. Remediation of a visual experience and transfer of emotions *must* have a recipient in order to actualize. The reader's response requires a certain degree of acceptance of immersion, which, once more, demonstrates that immersion is far from being passive and uncritical.

When immersion is examined from the perspective of the traditional concept of the image, the hostility towards it becomes more understandable. Traditionally, the viewer is kept at a distance from the object of his (typically male) gaze. The gaze has been understood as empowering the viewer and providing control over the object. An essential feature of assuming and retaining control is the controller remaining an outsider. The distance ensures the outsider status. The frustrated desire to interact with the visual by employing senses additional to the visual reinforces the sense of control, as the viewer refrains from the urge and keeps the distance. In the case of immersion, such as directly in the context of virtual environments, or indirectly, by verbal remediation, the viewer forgoes the distance and enters the visual. In such circumstances, the viewer, no longer an outsider, becomes part of the visual. By creating an intimate connection with the visual, the viewer has abandoned the perceived control and superior status with regard to the visual.

The prime features of virtual worlds, interactivity and immersion, strongly challenge the existing traditions in the study of the relationship between the visual and the verbal, particularly in the study of ekphrasis. Their interactivity is in contrast with the traditional textual encounter with the visual, which represents the viewer at a distance from the visual,

unable to employ any additional senses. In the traditional encounter, the control over the visual is enabled by the gaze over the distance. As Blanchot and the example from Egan show, the desire frustrated by the distance is a significant element in the creative process, as a trigger of inspiration. A critical question for a study on virtual ekphrasis, then, must be: if the distance disappears and the desire for closer, multisensory, immersive interaction is fulfilled, what happens to inspiration? As will be seen in subsequent chapters, a number of texts have chosen to represent virtual worlds and the human experience therein. Therefore inspiration must still happen, but what drives it? Either the initial assessment that traditional ekphrasis is inspired by the frustrated desire in the relationship between the viewer and the image is incorrect, or, in virtual ekphrasis, inspiration stems from something else.

This study hypothesizes that in the case of virtual ekphrasis, inspiration stems from a search for borders between the virtual and the real. Analysis of relevant texts in the subsequent chapters will discuss how, as the user enters the virtual world and experiences the sensory freedom offered by it, the user, paradoxically, reacts to this freedom by seeking restrictions, borders between the virtual and the real. Rather than becoming more comfortable with the visual in such an intimate connection with it, the user finds the experience unsettling. The image remains a representation rather than turning into what it represents, but, at the same time, it admits the viewer-user into itself. As the interactive and immersive experience resembles the experience of space, a discussion on virtual ekphrasis must be informed by elements of theoretical frameworks concerning space.

2.5 When image becomes space

Virtual worlds are, by nature, images. They are designed by artists and constructed by programmers by means of programming code. All digital images, including virtual worlds, exist, at the same time, as their visual representations and as their underlying code. Programming code consists of linguistic and mathematical signs. Different methods of coding are known as programming languages. In English, programmers are said to 'write' the code, and, hence, to 'write' things into existence. Thus digital visuals *are* both image and text at once, two sides of one coin, in a manner that would give pause to the theorists determined on the strict separation between the two. Interestingly, so far hardly any attention has been paid to this aspect of the digital image in terms of visual/textual studies. Further, digital images, in their code, also bring into play mathematics, which introduces an additional element to the traditional dualistic opposition. This is particularly evident when images are made three-dimensional, allowing the user to enter them and to move among them. Images open up into becoming illusionary space. What gives them a spatial aspect is the user's location within them and the ability to interact with and manipulate them. Although cinema allows for moving pictures, and, more recently, a certain amount of immersiveness in terms of the 3D-viewing technology, the viewer of a film remains an outsider, unable to interact with the visual experience or to have any control over it. Space is defined by the human experience within it (Bachelard 1969), and, so far, out of all the visual representations, only digital visuals, particularly in terms of virtual worlds, allow for the human experience within the visual itself.

In virtual worlds, the human experience of space is present in several ways. These include freedom of movement, sense of danger and security in different areas, virtual property and its expression of identity. When users talk about their experiences in virtual worlds, they, without exception, use spatial language as though they were discussing real world locations. Further, in the accounts, users typically refer to spaces with regard to themselves in the first person. Rather than describing the landscape around 'my character' they will say, for example, '*I* was standing on a narrow bridge in the dragon's castle and there were huge pools of lava far below *me*, and the spire went high up above out of sight.' The space becomes a personal experience to the user, rather than being incidental to the avatar.

In any virtual world, the user can move around the environment, subject to certain limits. Most virtual worlds allow the user to walk, run and jump over obstacles. Some, but not all, environments allow the user or the avatar to swim and dive through virtual water and even fly, either on their own, or by means of virtual creatures or vehicles. Other modes of transport, such as mounts or land- or water-based vehicles, may also be available. When the user/avatar moves either by his/her own means or by transport, the movement typically takes place across the virtual landscape. Different features and locations of the landscape are visible along the way, as they would be in the real world, although 'longer' journeys may be represented by real-time movement in the beginning and end of the journey, with the middle represented by a holding graphic, while the destination area of the world loads on the user's computer. Many virtual worlds also offer 'magical' instantaneous or faster movement by means of 'spells'. Usually, the freedom of movement is restricted to some degree. The user's avatar cannot penetrate the limits of the virtual world, and, on trying to do so, ends up running in place, held by an invisible barrier, even as the virtual landscape appears to continue to the horizon. A virtual world is subject to its own laws, as the physical world is subject to its own laws of physics.

In MMOs, users must typically choose a faction with which to side and whose territory to protect. Identification with the faction can become very strong. The factions typically have their own bases and outposts, which offer security and comfort by way of in-game facilities. These bases create a contrast with the uncertainty or outright threat of most areas, which are populated by monsters and enemies opposing the user. The level of threat varies by area and by game. If the avatar is killed, the 'death' effect is rarely permanent, but often the user loses some or all of the avatar's possessions and power. Areas, known as 'zones' also strongly vary in aesthetics and flavour, from urban waste lands to deserts, oceans and lush forests, all designed to create positive or negative responses in the players.

Many games allow for private virtual housing for the players. This allows the players to express their identities as individuals as well as members of an organisation. Some players dedicate themselves to decoration of houses and their virtual properties become known

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galleries or museums, sights for other players to visit.[2] The desire for personal housing in virtual worlds is such that in the case of *World of Warcraft*, the developers of which have categorically stated they do not plan to include housing, demand for it remains high on the list of requested features.[3] As a reason for the denial of this request, the *WoW* developers have stated that they wish to keep the public areas of the game busy, as otherwise players would retire to their own accommodations.[4] Here, the desire is to offer the experience of active, occupied public areas at the cost of individual expression.

In this thesis, ekphrasis is treated as an intensely individual, personal, experience, due to the strong emotions caused by the original visual and due to the necessity for appealing to personal past experiences and knowledge in the remediation. Bachelard (1969) has shown how spaces, particularly personal ones such as rooms in dwellings, are imbued with considerable personal significance and symbolism. If, in virtual ekphrasis, the viewer-users of the original visual attach personal significance to virtual worlds as place-like images, and, fundamentally, specifically experience them as space, then, in constructing a theoretical framework for this concept, we must allow for the presence of that space. Therefore, drawing influence into this study from space theorists is not only beneficial, but essential, in terms of understanding this expanded version of the image and its representation in text.

Initially, the theories on possible worlds, as developed by Eco, Doležel, and Pavel would seem attractive. Ryan has adapted their approaches into her own framework. According to this approach, reality is composed of a multiplicity of distinct elements, or worlds. It is

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[2] An example of the importance of housing to MMO players can be found in a blog post by 'Stargrace': http://mmoquests.com/2011/04/29/multi-housing-excitement-eq2-everquest2. She says, 'Decorating homes and "owning" a piece of the game is a really big deal to some players (not all of them, there are always those who are simply not interested) and I think the fact that EQ2 is willing to explore and upgrade these features is fantastic. There is a LOT of housing available in the game, and a lot of housing items. In fact even if you don't enjoy housing at all it's almost impossible to avoid that potion of the game because you get housing rewards for numerous quests, there are vendors all over, and the station cash store is filled with awesome furniture you can purchase. Having an option of 'something else' to do in game aside from slaughter creatures is a really important 'hook' to keep people in game.'

[3] On *GamerZines* website (http://www.gamerzines.com/mmo/news-mmo-player-housing-wow.html), J. Allen Brack, the producer of *WoW*, said on 7 March, 2011, that '"I don't necessarily think that it'll ever actually happen for WOW', despite the fact that 'it is still one of the most requested features by WoW's 12 million odd subscribers.'

[4] Statement on the game's US discussion forum (http://us.battle.net/wow/en/forum/topic/5911721342)

hierarchically structured by the opposition of the centre of the system to all other members of the set. At the centre lies what we call 'the actual world' and the satellites are seen as possible worlds. In order for a satellite world to be possible, it needs to be linked to the centre world by an accessibility relation. This means that impossible worlds are wholly unreachable, that is, unimaginable. Ryan notes that this model is easy to criticize due its central hierarchical model, as postmodernism in particular prefers to acknowledge a plurality of beliefs and perceptions. In order to counter the objections she offers a definition of actuality as proposed by D. Lewis (1978, 1986). In absolute opposition between the actual and the possible, possible worlds are products of mental activities. This would offer an interesting framework to the ekphrasis of virtual worlds, which, as discussed, requires a considerable amount of mental activity from the reader in terms of indirect immersion and ability to visualise a fictional computer-generated world. In relative opposition, according to Lewis, the actual world is one's own point of view, while possible ones are those that one looks at from the outside. This observation allows for historical, cultural and personal variations and addresses the postmodern criticism.

According to Ryan, if possible worlds are interpreted as textual worlds, this model predicts that most readers will find a realistic novel closer to reality than a fantastic one, because the actualization of the former does not require a modification of physical laws. This notion is also in line with the previous discussion of this thesis concerning how effective ekphrasis must anticipate the reader's level of familiarity with the topic, as well as his/her related previous experiences and preferences. Visualization and immersion are easier to achieve when the visualiser is able to draw familiar images from his/her previous experience. Ryan proposes the concept of the 'story-world', the scene and the time of the narrative window. According to her suggestion, spatio-temporal immersion takes place when the distance between the position of the narrator and the addressee, and the time and place of the narrated events, is reduced to near zero. Here, the concept of immersion forms another discord in the traditional dualities of word and image. Instead of restricting the domain of time to the word, and the domain of place to the image, immersion makes equal use of both elements.

The story-world concept proposed by Ryan seems to bear some, at least superficial, resemblance to Bakhtin's somewhat problematic chronotope. Nonetheless, the union of narrative time and space can be observed to lie in the heart of the concept. It enables the construction of a particular fictional world. Keunen (2000) links the mental process of reading to the chronotope. In his interpretation, genre memory attaches mental structures to generic chronotopes, which are acquired by readers in their cognitive development. This leads to memory schemata, activated during the reading process, which enables the reader to recognize the relevant chronotope and the corresponding narrative genre. Once more, the reader's previous experience and expectations hold an essential role in the reading process. In a later essay, Keunen places the concept of imagination at the centre of all definitions of the chronotope, suggesting that Bakhtin saw imagination as the cornerstone of the aesthetic experience. Keunen writes, 'A chronotope only becomes a chronotope when it shows something, when it brings to mind an image that can be observed by the mind's eye' (2010: 35), but, tantalisingly, does not expand this statement, familiar from ekphrastic studies, any further. In the same volume as Keunen, Ladin (2010) also makes a reference to ekphrasis without naming it as such. Writing about Keats' 'Ode to a Grecian Urn', Ladin suggests that the chronotope of the poem is generated by the description of the urn. It contrasts real life and the idealized life of art by assigning qualities to each: constricts, staticness and tragedy to the real world and vitality, creativity, emotionality and dynamics to the 'urn time-space'. Expanding from this, we can suggest that the urn – or any work of visual art subject to written description – creates an art-space, which frees the viewer from the linear progression of the human time-space of history.

Both the possible worlds theory and the chronotope discuss fictional worlds from the ontological perspective. Their connection to the reading process and to the reader's imagination makes them potentially useful for the current thesis. However, they do not address the core issue with which this thesis is concerned: representation. The spaces considered in this thesis are also images, visual representations. Any representation is brought into being through human agency. Therefore, any representation is also invested with values, symbolism and meaning. If we choose to represent a place or a space, we also imbue that location with such meaning. This also applies to virtual spaces, which, firstly, themselves represent non-physical concepts and locations, and, therefore, bear one layer of

meaning. Secondly, when they are represented verbally, they acquire an additional layer of meaning from this level of representation. Further, in their lack of consideration of the human experience, possible worlds and the chronotope do not offer a sufficient voice to the human within the space. As this thesis argues that the human experience in terms of emotions and senses additional to the visual sense alone is central in ekphrasis, it must incorporate in its discussion an element of the human experience in terms of space. From the methodological point of view, possible worlds and the chronotope are very vague, with a lot of applicability but not a sufficient amount of definition. As has been shown above, the concept of ekphrasis alone can be very nebulous due to the number of varied interpretations. In order to provide a solid foundation for a new framework, this thesis must look for an accompaniment to the concept of ekphrasis that would support it as firmly as possible. It is for these reasons that this thesis adopts the framework of geocriticism as its second major line of approach.

Bachelard's initial notion of symbolically significant space in context of the house was developed by Westphal into the broader framework of geocriticism, which considers the meaning communicated by space in more general terms, not limiting it to the house. Westphal requires physical, geographical spaces: *places*. Considering that virtual space is, by definition, non-physical, the application of geocriticism in this context would, at first, seem paradoxical. Westphal's methodology selects a particular geographical location, for instance, London, and examines it from interdisciplinary, intertextual, comparative and multisensory perspectives. A space is a holistic experience, experienced through all the senses and represented through a multiplicity of voices and methods. Yet, Westphal argues that, ideally, simply analyzing texts is not enough. An in-depth geocritical analysis should take into account also other kinds of material such as images and non-literary texts such as travel brochures. In practice, most scholars who have conducted geocritical analyses have simply focused on literary texts.

This thesis suggests that the geocritical approach is suited to analyzing representations of virtual space. Although Westphal states that geocriticism should focus on physical geographical locations, he does specifically allow the analysis of fictional places. His example, Poldavia, 'has formed a long intertextual chain' (2011: 118), which makes the

geocritical approach possible. He goes on to propose that 'we can even go further […] and allow ourselves to get lost in interstellar space.' He states that science fiction, here far removed from the 'lazy' genre fiction as described by Bolter, explores poorly mapped spaces of derealized mythic elements at the intersection between the real and the imaginary. Westphal's preference of physical, geographical places does not mean that he shuns the imaginary; instead, he prefers named physical locations to generic ones. Even then, he notes that such locations might offer theoretical frameworks for studies of more specific geographical referents.

As geocriticism is still in its early stages, it contains some flexibility. It is still being developed by Westphal himself, and also by other scholars. If imaginary geographical locations are possible, as long as an intertextual continuum has been established for them, we can argue for justification of virtual worlds in the geocritical context. True, the named locations in representations of virtual worlds vary from text to text, as we do not have one 'virtual London', for instance, to examine. Following Westphal's suggestion that studying a generic geographical feature such as a desert may assist in providing a framework, this thesis suggests that virtual space can be used for this purpose. Representations of virtual space have existed in a steady flow since the early 1980s, and, as Chapter 3 will demonstrate, they have both influenced real life technology and been influenced by it.

Virtual worlds are not physical. However, they provide a strong illusion of physicality, in their language, provision of freedom of movement and interactive elements. They are named and their users describe them in terms of physical locations. Westphal does not mention virtual spaces in his work, but, significantly, he does include the potential of computer graphics in the list of mimetic artforms offering interdisciplinary support to geocriticism. In writing about the importance of the multisensory aspect in the human experience of a space, Westphal notes the dominance of the visual sense in literary and cultural studies, and how it does not take into account other senses. He presents sight and hearing as senses of remoteness and cerebrality, while smell, touch and taste appear as bodily senses of intimacy. As discussed above, virtual worlds allow for a greater engagement of senses than non-digital imagery that keeps the viewer outside. Yet, smell and taste remain unattainable even in virtual worlds, for now, although some texts have

envisioned such a technology in the future. Touch, too, although simulated, remains illusionary. Is this illusion strong enough to count psychologically, or do virtual worlds, despite everything, still retain the distance that this thesis is arguing they are trying to close between themselves and the user? This issue is likely to generate debate until real life technology reaches the point of being able to simulate the intimate senses with greater conviction. The position of this thesis is that the illusionary touch is strongly psychological to the point of eliciting a large degree of intimacy, but the lack of actual touch retains the division between the image and the real, noted by Mitchell and Krieger as essential to the existence of the image.

An important element of geocriticism is the relevant historical context and the 'geocritical cycle': the influence of representations of the place on the place itself, and vice versa. If London is represented as a historical, foggy, mysterious city full of interesting characters, the real city may, influenced by the representations, strive to become that kind of a city. The representation and the referent are constantly evolving in a dynamic, interdependent relationship. The consideration of the historical context of the representations allows for analysis of the evolution of this relationship between the representation and the referent. This geocritical cycle between physical locations and their representations is perfectly matched, in terms of the virtual and its representations, by Lévy's approach of the virtual as potential. Part of his framework is the constantly self-renewing cycle between the virtual and the actual, which form an essential aspect of the creative process by bringing about representations that can act upon the real world. Thus we have a twofold cycle in the shape of the infinity symbol, flowing between the actual physical world, literary representations, and the virtual worlds. On another level, yet another cycle occurs. The ekphrastic dialogue takes place between the viewer-writer, the original visual (artwork) and the reader/listener. The representation of the original visual is created not only by the original viewer, but also by the reader of the ekphrasis. All these cycles can be brought together to support each other.

While the theory of potential worlds only allows for one viewpoint, that of the actual world in the centre of the system, Westphal distinguishes three categories of viewpoints. His division originally applies to geographical spaces, but all of these can also be found in texts

about virtual space. The *endogenous* point of view is that of a native: wholly familiar with the environment. In texts about virtual worlds, this point of view belongs to the fantastic entities who have achieved sentience: artificial intelligences and other sentient programmes, such as *Neuromancer*'s Wintermute. The *allogenous* point of view is represented by those who have comfortably settled in after arriving from elsewhere, but despite their naturalization, they are destined to remain foreigners. This point of view can be applied to the modern literary archetype of the super-programmer, invariably male, who claims to feel at home in virtual space and whose remarkable skills allow him a large degree of control over the virtual world. Case of *Neuromancer*, Hiro of *Snow Crash* and Jack of *Halting State* are all examples of this. The third point of view, *exogenous*, belongs to the newly arrived traveller, who perceives the space in terms of exoticism. In texts representing virtual worlds, this role is typically assigned to a female character, a complete newcomer to virtual matters, who is typically placed under the guidance of the allogenous male. For instance, Elaine of *Halting State* represents this point of view. These three points of view match the expectations and the experience of the likely readers. They also occupy distinct functions in the narratives. For example, the exogenous point of view is used in expositions of the technical aspects of virtual worlds, such as in explanations to the reader, via the newcomer, how virtual worlds work. Typically, these explanations involve considerable emphatic assurance that virtual worlds are technological, 'just pictures' or 'just data' and, most importantly, 'not real'.

In a study about representations of virtual worlds, we are dealing with a new kind of category. Virtual worlds undeniably consist of images, but, crucially, those images come together to form an interactive and immersive space, in which the user can have a multisensory experience. As shown above, it is the spatial element that comes to present the greatest challenge to traditional ekphrasis in a digital context. A strong theoretical framework is needed to support and help guide ekphrasis in its new direction. This, as demonstrated, is provided by geocriticism, itself now applied to a new, non-physical area. At the same time, considering space in the context of ekphrasis provides its own problems. Above, it has been suggested that the original visual in ekphrasis must be something significant and that it is this attribution of significance that has, in modern times, typically been a feature of works of visual art as represented in texts. However, literary texts are full

of descriptions of spaces: landscapes, houses, cityscapes, and so on. Are we to call those descriptions ekphrasis as well? Where is the border between ekphrastic descriptions of virtual and real spaces? This study puts forward that any evocative description that is intended to bring forth a strong, vivid, affective visual in the reader can certainly be termed ekphrasis. In those cases, the text must have moved beyond plain description and seek to enable immersion. However, this study is specifically concerned with *virtual ekphrasis*. A methodology to pick out and analyse representations of virtual worlds is called for.

2.6 Representing the virtual in text: A practical methodology

In order to analyze textual representations of virtual worlds we must be able to tell those representations apart from textual representations of non-virtual landscapes. The virtual worlds must be clearly identifiable as artificial and computer-generated, originating in human skill and imagination. They must stand apart from any secondary worlds of fantasy or mythology. Ryan (2001: 164) suggests the term 'virtual narrative' to describe a narrative mode which indirectly represents events 'in a reflecting device that exists as a material object in the textual world'. As examples she lists a mirror, a story within a story, photograph, film or television programme. Curiously, although her discussion is very aware of the computer-generated virtual, she does not appear to consider a computer terminal among these devices. She links virtual narration to ekphrasis by noting that, alongside paraphrase and summary, ekphrasis can be used to represent the reflected world by describing the material support that is the reflecting device. She differentiates 'real narration', which is what happens generally in the textual world, from the virtual narration, which happens in the reflecting device that is present in the textual world, on another metaleptic level.

Ryan's suggestion helps us to define a textual representation of a virtual world. It must be framed within the text by a device, which also exists as a technological object in the textual world. The virtual world must be accessed via this device. In most cases, this virtual environment appears in the reflecting device primarily as graphics, but also accompanied by sound, text and music. In certain texts, taste and smell, too, are envisioned as being simulated by the appropriate device. It is also possible that the textual representation refers

to an environment originally evoked by text, as in the case of Redmond's 'MUDe'. This is unusual and functions as a double ekphrasis of sorts: a notional game world is represented in the (also notional!) textual MUD, which is then represented in the text of the poem. Even in this case, the original MUD is represented in the device of an implied computer, as well as in the frame of the poem itself. The text must strive to represent, via the in-text technological device, a virtual environment defined by interactivity and immersion. Ryan proposes eight steps in technological immersion (p. 51).

1) The user accesses the virtual world in an act of active embodiment, participation of the full body instead of the Cartesian mind/body split. The entry does not simply happen in the user's imagination; it is an active step from the real environment to the virtual, even if the virtual only takes place on the computer screen.

2) The user enters a *picture*, an artificial representative construction. This picture, however, is spatial. Ryan requires three components for the experience of a presence within a virtual world: a sense of being surrounded, a sense of depth, and the possession of a roving point of view.

3) The picture represents a complete environment, involving several senses. Ryan refers to virtual art as having potential for 'total art', a concept that would involve all the senses in the artistic experience. Her example of the feelies from *Brave New World* offered visual, auditory, olfactory and tactile stimuli, but they were also accused of extinguishing critical faculties and making imagination obsolete. A modern student of the virtual worlds might find this warning very familiar.

4) The medium must be transparent. Although the user knows that the pictorial world consists of programming code, the computer itself is not visible. This is, of course, not as yet reality as our real technology has not reached the stage of full-body immersion. It is, however, regularly portrayed in fiction. Even at our current technological stage, we refer to events in virtual worlds as though they were taking place in their own reality, rather than as snippets of code on our technological devices.

5) As the code disappears, the 'dream' of the natural language appears closer. Interaction with the virtual objects and virtual people happens as easily as in the real world. Users are able to build a shared reality. Ryan suggests that an advanced virtual reality system would have no need for internal ekphrasis, as the omnisemiotic system will be able to employ all forms of representation, action and signification.

6) Within the virtual world, the user participates in alternate embodiment and role-playing by becoming a character in a story. Even in a non-narrative, non-ludic virtual environment the user becomes part of the reality of the setting.

7) The simulation of the virtual world becomes a narrative. Contrary to Baudrillard's definition of the virtual, the purpose of the simulation is not to falsely represent what is but to explore that which could be. The process follows Lévy's definition of the virtual as creative potential.

8) The virtual world experience is actualized as art. Enacting the narrative arising from the simulation is a pleasurable activity. There is no concrete real-world value or relevance to the simulation due to its virtual nature, but it acquires a clear artistic significance as an instrument of creativity and exploration.

To this, we might add a 9) The narrative of the virtual world experience is terminated either temporarily or permanently when the user disconnects from the virtual world and returns to his/her own reality. Elsewhere in her work, Ryan notes that in order to remain pleasurable, the experience of immersion must be temporary and remain separate from addiction.

The eight-step process described by Ryan applies to direct immersion. If an analysis of a text can detect the above steps in the remediated representation of the virtual experience, we are able to include it under the examination for virtual ekphrasis present in the text. In this examination, we will use the theoretical frameworks of ekphrasis and geocriticism as discussed above. Ekphrasis must seek to create a vivid, affective, immersive visual in the reader's mind by means of language alone. Ekphrastic language will employ non-essential details, metaphors, similes, perhaps even alliterative or otherwise mnemonic or poetic

language and appeals to the reader's personal experiences and background. Geocriticism will bring into discussion multifocalization, analysis of the human experience of space, multisensory and historical elements. Using these tools, the analysis of the relevant textual materials will examine the ekphrastic relationship between word and image in the new digital context, its changes, and its relevance to the human experience.

3. Emergence of virtual worlds in reality and literature

In order to fully contextualize fiction about virtual worlds with respect to the background knowledge available to the respective authors and their readers, this chapter will compile a timeline of digital graphics, online worlds and their literary representations. This chapter is interested in the mutual influence between the development of real technology and in the related evolution of representations of technology in fiction, as an example of the geocritical cycle identified by Westphal, and of the cycle of actual-potential as proposed by Lévy. An exploration of such a cycle automatically employs the geocritical principles of interdisciplinary approach, intertextuality and comparativeness, as texts are discussed in relation to each other and their broader context.

In terms of ekphrasis, the context of the text – as that of the visual represented – is of crucial importance. Contrary to the issue of institutions, as discussed by Heffernan, digital graphics cannot be removed from their original context to a museum or similar. Since the popularization of the internet, digital artworks of all sorts have been viewable anywhere in the world. An exhibition of computer art or video game art may provide cataloguing and explanatory notes, but if it still allows interaction with the examples by the exhibition visitors, the artworks are not unduly artificially restricted. If the interaction is not allowed, the situation would be the same as an exhibition of traditional paintings that would only allow half of each painting displayed, while covering the other half. In such a case the artworks are not so much removed from their original context as displayed in a misleading manner within that context. The impression that is formed in the mind of the viewer depends on the context: where and how the encounter takes place and how much the viewer can relate to the artwork.

Consequently, the power of the ekphrasis produced by the viewer-writer depends on how vivid the evocation is and how well the reader is able to immerse him/herself in the text. The mental visualization is dependent on the level of familiarity with the topic. If the situation that is being ekphrastically evoked can be expected to contain at least some familiarity to the likely readers, the writer is able to employ different strategies in the textual evocation, without needing to risk interruption in the immersion by spending time at

the explanation of the concept. In the terms of the 'story-world' concept, as proposed by Ryan, the distance between the position of the narrator and that of the reader is very short. While Ryan suggests that for maximum immersion, the distance should be zero, this thesis would propose that the distance should be short, but it should still be there, as, paradoxically, it is that distance that also creates the attraction in the reader. For the readers of science fiction, the distance is a key element – they prefer to read fiction about innovative technology and social concepts. In such a case, the fascination with the premise of the story and the subsequent emotional engagement help with the additional mental effort required for immersion. The distance between the reader and the narrator is a safety net, which separates fiction from reality. Hence, the balance between the distance and the familiarity needs to be judged carefully by the writer who wishes for maximum immersion, and/or maximum ekphrasis.

3.1 Origins of the virtual in technology and imagination in the 1960s and the 1970s

As early as in 1964, Daniel F. Galouye published a novel titled *Simulacron-3* (retitled in the UK as *Counterfeit World*), which represents a virtual city with residents who are unaware that they all are nothing more than electronic computer impulses. Galouye's text had taken an innovative step further from works such as Frederik Pohl's 'The Tunnel Under the World' (1955) and Philip K. Dick's *Time Out of Joint* (1959), which represent non-computerised constructed realities and residents who are unaware of the actual state of the affairs. Around the same time, in the early 1960s, the roots of what we today understand as technological virtual began with the development of computer graphics. Some of the first computer games were designed by students at the Massachusetts Institute of Technology. The most famous of these early examples was *Spacewar!* of 1962, which employed rudimentary graphics consisting mostly of simple dots and lines. Even at this early stage, the traditional written word, in form of literature, functioned in a subtle, but important role. The concept of *Spacewar!* was originally inspired by E. 'Doc' Smith's pulp science fiction novels ('*Story of Spacewar!*'). *Spacewar!* was only playable by two people on the same computer, but its execution came to herald the arcade games of the 1970s and 1980s. It was also a very early example of the role of games in the development of innovative computing

applications. *Spacewar!* was consequently used to demonstrate the power of the PDP-1 machine on which it was run ('*Story of Spacewar!*').

A crucial part in the process of emerging computer graphics was played by the computer scientist Ivan Sutherland, whose work laid the foundations for future graphical user interfaces and for the broader concept of a computer capable of rendering images, rather than simply handling text alone. Sutherland invented a program called Sketchpad, which allowed a user to draw lines and combine them into shapes on the computer screen. He envisioned computing technology that would be able to render sensations to its users that would seem real to them. The first head-mounted display system intended for 'virtual reality' (although the term was not used at the time) was created by him in 1968 (Sutherland 1968). Sutherland's project was partly supported by the Advanced Research Projects Agency (ARPA) of the US Department of Defense. In 1969, the Agency put in place the first network of computers connected to each other, consisting of four US universities. This precursor to the internet, known as ARPANET, remained in place, steadily growing, but, like any computer use in the 1960s or 1970s, it was restricted to the use of academic and military institutions, until its formal decommissioning in early 1990.

Computing students were quick to discover the potential of the early graphics, on their own, or in combination with digital text, for the purposes of new forms of storytelling that included a significant dimension of personal participation. The students would have been influenced by the fledgling video game industry and by the birth of the concept of tabletop roleplaying games. Following *Spacewar!*, another milestone in the history of computer gaming was *Pong* in 1972, an arcade game by Atari Interactive (Messinger and Stroulia 2008). Unlike *Spacewar!*, originally restricted to a computer laboratory, *Pong* was created for the amusement of the general public. It was followed by such seminal names in computer game cultures as *Space Invaders* and *Pac-Man.* Arcade games were not networked, and as such they only involved a single player playing against the computer. Away from the public, at NASA Ames Research Center in 1974, players were able to play one game simultaneously on networked computers. *Maze War* allowed players to enter together a computerized game world, in which they could travel around a maze and 'shoot'

each other (Damer 2008). The concept of the computer screen as a 'window' to another 'space' that could be described in spatial terms was beginning to form.

Arcade games introduced the element of real-time interactivity to existing features of non-computerised games such as problem solving and fantasy roleplaying (Messinger and Stroulia 2008). The latter in particular was rapidly gaining popularity, following the publication in 1974 of *Dungeons & Dragons: Rules for Fantastic Medieval Wargame Campaigns Playable with Paper and Pencil and Miniature Figures* by Gary Gygax and Dave Arneson. *Dungeons & Dragons* (henceforth: *D&D*) and other subsequent roleplaying systems became inseparable from the development of virtual worlds, with a number of groundbreaking game developers citing *D&D* as an early influence, as will be seen below. Played without a game board, the only necessary game pieces required by roleplaying games were a pen, paper, the rule book, and, most essentially, vivid imagination. They allowed, for the first time, codified tools for players to enter an imaginary world and to personally participate in a storyline. Children have always played games of let's-pretend, but roleplaying games enabled teens and adults to weave together a complex interactive narrative and cast them as characters in the story, significantly, with an immediate effect on the story and on the fictional world in which the narrative takes place.

Many of the basic notions from roleplaying games made a later transition to virtual worlds, starting from the concept of an avatar or character representing the player. Other similar features include overt or subtle influence from the high fantasy genre, including fantastic creatures such as dragons or orcs, numerical representation of an avatar's abilities, and the idea of quests with significant rewards. Tabletop roleplaying (so called because players typically sit around a dining table) has remained reasonably popular, although in recent years its popularity has suffered because of computer games. Offline roleplaying has evolved into new forms such as live-action roleplaying (LARP), in which players act out the narratives, often dressed in appropriate clothing and carrying appropriate props.

Roleplaying gains further significance to the current thesis from its own nature as a deeply ekphrastic form of storytelling. In a roleplaying group, a verbal narrative, guided by the referee/coordinator/facilitator/chief storyteller known as the Game Master (GM), but

influenced by the entire group, is intended to create a deeply immersive experience. The Game Master describes to the players what their characters see, hear and experience, while the players describe to the Game Master and to the other players what actions their own characters take or how their characters are feeling about the situation. The visuals of another world, its inhabitants, treasures, and locations, are evoked by means of words for the players to picture in their mind's eye. Further, the players are invited to imagine the entire breadth of sensory experiences described in the otherwise unreachable game world. The key aspect of roleplaying, as it is in the Classical sense of ekphrasis, is the sense of being personally present in the events described. The player does not simply read about a hero slaying of the mighty dragon and taking its hoard of gold, while rooting for the hero; the player *becomes* the hero who slays the dragon and who takes the hoard. Moreover, the aspect of personal influence in the game world means that if, instead of slaying the dragon, you decide to become its ally and terrorise the people of the land, you are, theoretically, able to do so.[5]

Having experienced arcade games and *D&D*, students of the 1970s began transposing their experiences to a computerised format. In 1976, MIT student Will Crowther created the first *D&D* influenced, text-based, single player fantasy adventure game, *Colossal Cave Adventure* (Kushner 2008). In text games, players were provided with textual descriptions of locations and situations, in which they found themselves. The verbal evocation of fantastic visuals present in *D&D* had become text on a screen, but the living Game Master had become an impersonal computer program, unable to provide feedback other than that in very strictly defined parameters. Players had a certain freedom to move around by typing in simple directions. They could battle monsters by typing in relevant commands. *Colossal Cave Adventure* went on to inspire *Zork*, a significant milestone in the history of computer gaming, originally developed between 1977 and 1979, also under the tradition of *D&D* (Anderson and Galley 1985). Although it, too, remained fully textual, a review in the *BYTE*

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[5] The freedom of offline roleplaying games suffers in computerised versions. As the GM is replaced by strictly pre-written plot and pre-programmed events, even if a certain amount of choice and branching storylines are allowed, in computer games and ludic virtual worlds the player's narrative freedom is still subject to restrictions demanded by the linear, unchanging, ultimately unresponsive setting and plot. Today, so-called 'sandbox' games with little or no plot framing the character's enterprises have responded to the 'artificial' restrictiveness, but they typically fail to attract the same amount of interest as strongly plot-focused games.

magazine in 1981 praised the game, noting that unlike its predecessors, this game could be 'felt and touched – experienced, if you will' (Anderson and Galley 1985). Improvements in the user's ability to interact with the text game had dramatically increased the player's ekphrastic sense of personal involvement.

3.2 The expanding horizons of the personal computer in the 1980s

As single player text games, such as *Zork,* received more attention, students accustomed to the tradition of *D&D* likely wanted to experiment with the multi-player format on developing computer networks. What might be termed as the first 'true' virtual world, in the sense of allowing multiple people from separate locations to access a shared computer-generated 'space', and to interact with each other and the environment, was created in 1981. Still text-based, the first 'multi-user dungeon', abbreviated to 'MUD' and simply named *MUD1*, was the work of Richard Bartle and Roy Traubshaw, both *D&D* players, while they were undergraduates at the University of Essex (Castronova 2005, Kushner 2008). While *MUD1* broadly followed *D&D* structures and rules, its emphasis was on socializing and 'chatting', with players often primarily logging on to converse and to 'meet up' with others rather than to focus on the game itself. Such important social aspect of *MUD1* anticipated the similar function that many MMOs today hold. Although the main purpose of a ludic virtual world is nominally to play a game, to many of the players the social aspect of conversing and 'doing things' with friends is equally, if not more important, than progress in the game itself.

These proto-virtual worlds like *Zork* and *MUD1* were restricted to a very small percentage of the population. They were accessible by staff and students in research institutions, using machines, the size and cost of which were completely beyond single individuals at this time. The few personal computers that became available in the late 1970s, such as Apple II in 1977, did not have the processing capacity to run these games. In any case, networked games like *MUD1* on personal computers would have been pointless, as domestic connectivity to information networks did not yet exist. Much of *Zork*'s success in the early years of the 1980s was the result of its developers understanding the availability problem. They compressed the files and invented new programming languages to bring down the

game's size. Although the developers enabled more people to become more familiar with the concept of imaginary worlds accessible by means of computer terminals, personal computers would still not become anything resembling mainstream until the arrival of the Commodore 64 (C64) in the second half of 1982, its competitors, and the first Apple Macintosh. Significantly cheaper than Apple II, C64 was soon joined by competitors such as the Atari models and the Amstrad CPC 464. Personal computing was, at this point, considered lucrative enough for several companies to invest in its production. In 1984, Apple launched the Macintosh, the first successful personal computer with a graphical interface. A computer was no longer simply considered machinery reserved to academic institutions. Nonetheless, a personal computer remained a state-of-the-art appliance, affordable and justifiable only by a small segment of Western society.

The increasing availability of personal computing and computer games correlates with first texts about virtual worlds as we know them today. The texts were classified as science fiction and intended as entertainment, but as with much of SF, they speculated on the potential of new ideas and their application in society. In 1980, John M. Ford's *Web of Angels* became one of the first texts, if not the very first one, to depict a communications network in spatial terms. The 'Web', as the network is known, allows travel through star systems and contains both desirable treasures and monsters, familiar motifs from roleplaying and text-based games. The novel anticipates the future archetype of a lone male hacker on the fringes of society, whose remarkable programming skills allow him virtuoso control over the network. Another pioneering text was Vernor Vinge's novella *True Names* (1981), which presents a full-immersion virtual reality known as 'Other Plane'. The text employs a number of tropes from fantasy games as well as the motif of the disaffected computer genius, here called 'wizard'. Vinge had been writing futuristic fiction about the human relationship with technology since the 1960s. Due to his academic career in Mathematics and Computer Science at San Diego University, he had been exposed to information technology from early on.

Film industry responded to the rise of the popularity of computing and computer games with *Tron* (1982), which imagines users as god-like revered beings amongst the anthropomorphized programs inside arcade games. *Tron* was also one of the original films

to employ a significant amount of computer graphics in its technical realization, combining a semi-animated look with the live actors. As one of the first visual representations of the new concept of the 'space' behind the computer screen, *Tron* established much of the 'cyber' look in popular culture and fashion for the following two decades, with its imagery of darkness broken by artificial, neon lights, and its preference for exclusively urban landscapes of straight lines and geometrical symbols over curved, irregular outlines of the natural world, daylight and green environments.

The motif of a human programmer with the power to control the frightening, alien, virtual space was developed into its full potential by William Gibson in his *Neuromancer*, which in 1984 became a turning point in the history of literary representations of virtual worlds. Inspired by Gibson's observation of teens playing arcade games as much as by the 1960s drug culture (McCaffery 1991), the influence of this text came to be felt not only in the subsequent literary genre of cyberpunk, but also in films, fashion, games and technology itself. The term 'cyberspace', coined by *Neuromancer* to describe the illusionary space between the controls of the computer and the execution of commands, was adopted by other authors, scholars, journalists, advertisers and technology industry alike. The term remained popular for the best part of two decades, until it gradually faded down in the first decade of the 21st century, as the monolithic 'cyberspace' fragmented into numerous self-sustaining communities. A significant development in *Neuromancer* is its rejection of a high fantasy setting or fantasy-inspired motifs, in favour of dysfunctional characters in a gritty and dark underworld of crime and substance abuse. Gibson continued the themes of *Neuromancer* in its loose sequels *Count Zero* (1986) and *Mona Lisa Overdrive* (1988).

As the graphics technology developed, increasing the ability of computers to display and modify images, games and other applications began to incorporate visuals. The Video Graphics Array (VGA), invented in 1987, significantly improved the colour, memory and resolution of images on personal computers. 1988, the first graphical virtual world, Habitat, created by Chip Morningstar and Randy Farmer in 1985 opened for business (Damer 2008, Rossney 1996). Following the trend of socializing rather than strictly focusing on gameplay, Habitat had a social rather than ludic premise. It was the first virtual world to call the graphical representations of its users 'avatars', although the term was not

popularised until the following decade by the author Neal Stephenson, who independently invented the same term (Damer 2008). The avatars of Habitat 'talked', 'gestured', and moved around in a coherent, persistent geography and were able to make use of a token-based internal economy (Rossney 1996).

3.3 The enthusiasm of the commercial internet of the 1990s

The ARPANET was formally decommissioned in 1990, leaving the way open to the development of the commercial network, now known as the internet, although it remained primarily in the use of institutions until the end of the decade. The first web browser-editor, called WorldWideWeb, was invented by Tim Berners-Lee in the same year (Berners-Lee, *W3.org*). Around the same time, in the first years of the 1990s, IBM, Dell, Compaq and Apple were powerful on the personal computer market, with small inventions such as the CD-ROM, Zip Drive, digital music files and the USB drive creating an increasing sense of portability and convenience. Graphics technology developed quickly, allowing the computer and video game industry to grow strongly during this decade, as more and more people acquired computers for home and the first major video game consoles, including Sony's PlayStation (1994) and the Nintendo 64 (1996) were released. New video cards offered 3D functionality, which enabled higher quality rendering and detail in single-player games and in emerging virtual worlds. In 1995, Microsoft released its improved graphical user interface for its operating system, known as Window95, which increased the user experience that the digital world was oriented towards images.

In 1991, Howard Rheingold published his influential textbook titled *Virtual Reality*, which enabled large numbers of students and other interested individuals to familiarize themselves with this fascinating new concept of a technologically constructed, but human-perceptible environment. In fiction, one of the first examples to tackle the topic was the comic strip *Wild Palms*, written by Bruce Wagner, which explored the dangers of virtual reality in the context of political manipulation of the masses. Having appeared in *Details* magazine from 1990 to 1992, it was adapted into a television miniseries in 1993, produced by Wagner together with the well-known film director Oliver Stone. Elsewhere in the field of cinema, the 1992 horror film *The Lawnmower Man* was the first feature-length film to depict virtual

reality. It did so in contexts of insanity, illicit sex and dangerous scientific experiments, exploring the presumed dangers of the new technology in the exaggerated manner typical of the horror genre.

The seminal text of the 1990s was published in 1992, with Neal Stephenson's *Snow Crash* imagining a global information network with graphical representations of imaginary locations and of the users themselves, no longer bodiless and abstract but colourful, coherent and individual. The text went on to receive popular and critical acclaim and, like *Neuromancer* before it, it influenced a whole new generation of artists and programmers. With its 'metaverse', populated with imaginative and individualized avatars in a virtual environment dedicated to entertainment and socializing, *Snow Crash* came to herald the first flowering of graphical virtual worlds in the mid-1990s.

Five 'sociable' virtual worlds, which focused on exploration, conversation and leisure, rather than on game playing, were launched in 1995 (Damer 2008). *Worlds Chat*, by Worlds Incorporated, was a graphical virtual 'space station', which provided users with a rich spatial experience enhanced with sound. Communication between users took place by text chat. The same company's *AlphaWorld* gave users, for the first time, the opportunity to build graphical objects of their own, using premade materials. Damer (2008) argues that *AlphaWorld*, with its provision of building for users, contributed to the initial success of *Second Life* in the early 2000s. Another virtual world offering such a creative experience was Time Warner's *The Palace*, in which users could create their own two-dimensional 'room' with the help of a simple image backdrop. Microsoft's *V-Chat* explored the surreal possibilities of mutable virtual space, allowing for exaggerated, cartoony features in the avatars' self-expression and in the various 'local' spaces of the virtual world (Rossney 1996). Moving in a slightly different direction, Fujitsu's *WorldsAway*, the successor for *Habitat*, expanded the barter possibilities of its predecessor within a coherent virtual economy. All these early examples demonstrate that far from simply offering passive consumption, propelled by the presumed loss of critical faculties in an immersive environment, virtual worlds have provided a strongly creative element from the beginning. Users have been able to modify virtual space to their own requirements and preferences, or to engage in economic transactions. Interestingly, the ludic turn in the virtual worlds in the

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final years of the decade, discussed below, restricted these freedoms to some extent, or at least substantially modified them.

In his introductory article to the virtual worlds of 1995, Rossney (1996) uses concepts and vocabulary borrowed from Stephenson:

> I'm going to call them metaworlds. This is partly in homage to Neal Stephenson, whose 1992 novel *Snow Crash* portrayed a metaworld that's a few technological and cultural notches above what's possible right now: the Metaverse, a virtual world so immersive and detailed it rivals the real one. One feature of Stephenson's Metaverse that these real-life meta-worlds all share is the avatar. Your avatar is an animated figure or icon that represents you when you're in-world. You tell it where to go and what to do. You see what it can see. You don't talk: your avatar does. You don't wave or smile: your avatar does. (http://archive.wired.com/wired/archive/4.06/avatar.html [Accessed 18 October 2014])

The concept of a virtual world is new enough to require explanation, but the article assumes that even if the readers have not read *Snow Crash* (yet), they have most likely heard about it. The novel is used by Rossney as a useful reference point, or, as per Yacobi's (1995) suggestion, as a 'model' to aid the reader's visualisation of the concept. Rossney's optimism about virtual technology is palpable: he notes that the technology of *Snow Crash* is only a little bit beyond what is possible at his time, although the difference between the global Metaverse and the very small userbases of the 1990s virtual worlds is considerable.

Throughout the 1990s, Stephenson and Gibson continued as major writers of fiction about virtual worlds and related topics, with the latter's 'Bridge' Trilogy of *Virtual Light* (1993), *Idoru* (1996) and *All Tomorrow's Parties* (1999) and the former's *The Diamond Age* (1995). At the same time, other authors were beginning to join them. Jeff Noon's psychedelic *Vurt* (1993) presented an alternate reality accessible through addictive hallucinatory feathers. It is notable that *Neuromancer*, *Snow Crash* and *Vurt* all associate the virtual with varying degrees of drug use. In *Neuromancer* and *Vurt*, the respective protagonists, as addicts, seek access to the virtual through crime. In *Snow Crash*, the eponymous virus/drug causes damage not only in computers but also in human brains. Despite the status of computer science as a respectable discipline, perhaps with some 'nerdish' negative overtones, the prospect of applying information technology among the public seems to have created edgy associations of countercultures. The apparent potential

of the virtual to offer intense non-physical experiences seems to have found its only conceivable parallel in the effects of drugs.

The dark themes of the Gibsonian-Stephensonian style of writing produced a subgenre of science fiction, termed cyberpunk: texts dealing with issues of humanity's relationship with technology, typically with 'punkish' elements such as anarchy and entropy. Exploring the potential pleasures and dangers of the virtual were not its sole focus. It also questioned topics such human identity in the face of the technological growth and the meaning and transference of knowledge and language. Such themes began to spread to cinema, also, with Gibson writing a screenplay for the 1995 film adaptation of his own short story *Johnny Mnemonic*. In 1999, David Cronenberg directed *eXistenZ* , in which the realities of life and virtual game merge, with layers of each set in one another, until neither the viewer nor the characters are certain about the nature of the characters' existence. In the same year, the first instalment of the popular *Matrix* trilogy asked similar questions about the nature of reality, and what the increasing virtual technology would mean to it.

Less well-known authors from this decade include Melissa Scott, one of the few women to raise the above themes in her works *Trouble and Her Friends* (1994) and *Night Sky Mine* (1997), particularly from the perspective of gender, and Paul J. McAuley, whose *Fairyland* (1995) situates the themes and motifs of a hero's quest, familiar from fairytales and fantasy stories, in the future of the virtual and nanotechnology. While McAuley's vocabulary of fairytales – 'fey', 'trolls' and so on – in a technological setting may seem incongruous at first, precedents to it are found throughout the fantasy game-informed history of virtual worlds, as has been described above. In the 1990s, the association between high fantasy and the virtual returned in force, perhaps partly in response to the gloomy vision of the virtual as presented by the fiction of this time. The first novel of the *Otherland* series by Tad Williams, *City of Golden Shadow*, published in 1996, transports its human characters from their day to day world entirely into the virtual game world, where they must defeat obstacles and enemies on a mysterious quest. In an unusual twist in the representational cycle, *Otherland* was briefly in the process of being converted from a fictional MMO in the novel series into a real world MMO until the project was halted in 2014.

The original *Otherland* series foresaw the popularity of massively multiplayer online games, which began, as we understand them today, in the following year, 1997, with the release of *Ultima Online* (*UO*) by Origin Systems. Like its MUD predecessors, *UO*, also, was influenced by tabletop roleplaying. *UO*'s original developer, Richard Garriott, has noted that computer connectivity enabled him to transport his hobby online, with the computer environment providing a perfect translation for the *D&D* method of representing characters and actions by numbers (Kushner 2008). Another groundbreaking high fantasy MMO of this time was Sony's *EverQuest* (*EQ*) of 1999. The success of MMOs was made possible by the continuing increase in access to the internet from personal computers towards the end of the 1990s. Personal computing sales kept rising, while internet connections widened and became more reliable. ISDN connections were followed by always-on broadband, which became available to the general public at reasonable prices by the end of the decade. Different companies, such as Microsoft, Netscape and IBM, began to develop their own web browsers as a response to the rapid expansion of the internet, following the growing user base. In 1998, a series of virtual conferences called 'Avatars' was started, with 4000 participants attending in a single shared space via their avatars (Damer 2008).

3.4 Consolidation of the virtual in the 21st century

After the novelty-coated optimism of the 1990s, the 'dotcom crash' in the first decade of the 21st century failed numerous web-based companies and brought out new cynicism regarding the internet in both academics and in the public. On the other hand, those companies that survived the end of the first boom, such as Google and Apple, emerged stronger and became household names. Google produced a myriad of new user-friendly applications, among which is a particularly good example of the representational cycle between reality and literature. In 2005, Google released 'Google Earth', a virtual representation of the globe available to download to personal computers. One of the original developers, Avi Bar-Zeev (2006, 2007), acknowledges in personal blog posts the striking similarity that Google Earth bears to the virtual 'Earth' program in *Snow Crash*. In Stephenson's novel, the 'Earth' program acts as a panoptic surveillance device, which turns

information from the real world into realistic graphical representations. It lets Hiro examine what is happening in any place of the real Earth at any given moment:

> A globe about the size of a grapefruit, a perfectly detailed rendition of Planet Earth, hanging in space at arm's length in front of his eyes. […] It is a piece of CIC software called, simply, Earth. It is the user interface that CIC uses to keep track of every bit of spatial information that it owns – all its maps, weather data, architectural plans, and satellite surveillance stuff. (p. 99)

Unlike Stephenson's original version, Google Earth does not provide real time information, but it does allow the viewer to examine realistic representations of actual geographical features and places of interest. Bar-Zeev notes further that while influences to the concept itself likely originated in several different creative works, such as in the *Powers of Ten* documentary films, and in *Star Trek*, *Snow Crash* was certainly highly influential to the developer team, to the point that Bar-Zeev attempted to persuade Stephenson to visit the company offices for discussion. Since its real-world inception, Google Earth has been used for a number of educational, awareness and tourism purposes. In *REAMDE* (2011), Stephenson reappropriates the concept in an ironically mock-modest remark, self-referential in its obvious lack of direct references:

> The opening screen of T'Rain [the virtual world of the novel] was a frank rip-off of what you saw when you booted up Google Earth. Richard felt no guilt about this, since he had heard that Google Earth, in turn, was based on an idea from some old science-fiction novel. (p. 38)

Google's success took advantage of the continuing rapid progress of personal home computing that had started, in earnest, in the mid-1990s. While laptops, mobile phones and personal digital assistants (PDAs) had existed in the mainstream since the mid 1990s, access to information, still and moving images and voice technology was now no longer dependant on phone lines or wired or wireless internet connections, thanks to 3G technology. Apple's release of the iPhone in 2007 marked a significant milestone in ubiquitous computing. Personal technology used to access the internet had not followed the predictions of the 1980s of wearable suits and goggles, but its portable, omnipresent nature had, by now, made it no less intimate. The emergence of social networking and the

popularity of video and image sharing sites have strengthened the general familiarity with computing technology.

For the moment, mobile devices are not powerful enough to handle the vast processing power required of modern desktops and laptops used to access today's complex, graphically detailed virtual worlds. As Castronova (2005) observes, the attempts at full-body immersion were abandoned in favour of immersion in the sense of powerful experience of a narrative. Since *Ultima Online* and *EverQuest*, dozens of MMOs have been released, to varying degrees of success, headed by *World of Warcraft* (*WoW*) (2004) with its ten million subscribers.[6] Most of them have remained in business since their launch. Although the level of narrative dynamic and its restrictions to the gameplay vary from game to game, from *WoW*'s mostly linear narratives with players having little effect on the game world at large, to minimal narrative in economy-, exploration- and building-focused games such as *EVE Online* or *Wurm*, games, in general, have triumphed over non-ludic virtual worlds.

The most notable of non-ludic virtual worlds is *Second Life* (2003), which was directly inspired by Stephenson's Metaverse (Sydell 2010). Although *Second Life* is, by far, the most popular virtual world in terms of published academic research, in practice its use is increasingly restricted to the academics themselves, artists and corporate or educational representatives. Instead, the majority of virtual world enthusiasts prefer the narratives of the ludic worlds. While the ludic worlds offer greater or lesser immersive roleplaying experiences by allowing the user to cast him- or herself in a setting-appropriate role, in *Second Life*, at least theoretically, the user is assumed to remain in the virtual 'shadow' of the real world. Fantastic features may appear, but they are treated as ornamental, not as 'real' in the context of the setting world's own reality, as the case is with ludic virtual worlds. In *World of Warcraft*, a dragon is often a monster to be defeated, but in *Second Life*, a dragon is far more likely to be someone's art installation, pet, or even a statement avatar. *Second Life* represents the illusion under control, a 'safe' immersion, in which the mutable environment is subject to the user's whim, whereas, according to this approach, a

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[6] As of February 2013, *WoW*'s subscriber numbers were reported widely as having fallen to 'mere' 9.6 million from the ten million at the launch of the latest expansion in late 2012. (http://wow.joystiq.com/2013/02/07/world-of-warcraft-down-to-9-6-million-subscribers/).

ludic virtual world presents a dangerous level of immersion, which removes the user's critical faculties, as he/she is borne away by the fantastical narrative.

In the literature of the 2000s, the ludic turn of virtual worlds has not gone unnoticed. A new strong trend of representing virtual worlds as games has emerged in the past decade, following Williams' *Otherland* series, which came to a conclusion in 2001. In a rare instance of the virtual appearing in poetry, John Redmond represents a tragic childhood memory via a text-based *Dungeons & Dragons* MUD in his 'MUDe' of 2008, present in a collection of the same name. Charles Stross, also strongly influenced by his experiences playing *D&D*, employs not only the motif of a ludic virtual world but also many of the relevant tropes in the text of *Halting State* (2008), which examines the connections between the real world and the game world through border-crossing financial crime. The same premise of a crime investigation joining the real and the virtual occurs in J.D. Robb's *Fantasy in Death* (2010). Diane Duane's *Omnitopia Dawn* (2010) envisions a game universe, in which the players can not only see and hear, but also taste and smell the virtual. In Ernest Cline's *Ready Player One* (2011), a vast MMO dominates the culture of an otherwise ruined real world. Most recently, Neal Stephenson has followed the ludic trend with his *REAMDE* (2011), which also uses the vehicle of financial crime, joined by the threat of terrorism, to explore the borders between the virtual and the real.

Elements of the ludic trend also appear in Vernor Vinge's *Rainbows End* (2006), which, additionally, heralds another new trend of representing the virtual as a graphical overlay superimposed over the 'real' world by means of spectacles. This graphical overlay, known as augmented reality (AR), also appears in *Halting State* and its loose sequel *Rule 34* (2011), used in both texts for a variety of purposes such as entertainment, navigation and law enforcement. In the spring of 2012, augmented reality took a considerable step forward in actual reality, as Google announced its Project Glass: a computerised headpiece for sharing and accessing content online. Similarly, Google also launched its augmented reality massively multiplayer game Ingress for beta testing in late 2012. Played on a mobile device application, the player is presented with a map of the nearby area with particular locations marked for exploration.

As the number of texts featuring virtual elements has increased, they have also moved towards the mainstream. On the one hand, texts of greater complexity and depth than those following the typical conventions of cyberpunk-derived science fiction have appeared. *Plowing the Dark* (2002) by Richard Powers was the first novel to explore the virtual from a non-science fiction perspective. Instead of focusing on gaming, the technology itself or on warnings of the future, this novel chooses to explore the relationship between language, the virtual image and the human experience. In *Air* (2004), Geoff Ryman asks questions about the mutual confrontation of cultures and about the role of the media in modern society. His virtual is part television, part internet, part hallucination, as globalization invades a remote village in central Asia. Following the strong connection between information technology companies and the economic growth in the 1990s, as well as the dotcom crash, Don LeLillo's *Cosmopolis* (2003) comments on the artificial nature of what we call reality and its financial crises. David Cronenberg returned to the questions of technology and the society in his film adaptation of *Cosmopolis* of 2012.

On the other hand, even more conventional fiction has changed its approach toward the virtual, to a degree. Rather than always representing fully outlandish situations in the intermediate to far future, literary texts about the virtual are increasingly set in the near future, within a few years of the present, or set in a way that the exact time is difficult to distinguish. Features of information technology and the virtual in particular can now play supportive roles, and they are no longer innovative enough to function as the main themes or motifs of narratives. Such features have become elements of high-tech, high-success society. Computing devices and data manipulation now represent status, rather than something unfamiliar and unsettling, as in the 1980s. Examples of recent 'technothrillers' featuring virtual elements include Richard Morgan's *Altered Carbon* (2002), Ian McDonald's *River of Gods* (2004) and its sequel collection of short stories, *Cyberabad Days* (2009), Daniel Suarez' *Daemon* (2006) and its sequel *Freedom* (2011), as well as, to a very large degree, *Halting State* by Stross, its loose sequel *Rule 34* (2012), and Stephenson's *REAMDE* (2011).

In 2012, Jeremy Bailenson, director of Virtual Human Interaction Lab at Stanford University, and Jim Blaskovich published *Infinite Reality, The Hidden Blueprint of Our*

Virtual Lives, in which they discuss the potential of virtual reality. They argue that the human need for escapism has always driven creativity and new media for that purpose, from stories to the written work, cinema, and digital games in consoles and mobile technology. Virtual reality, they suggest, is just another extension of that need. More recently, in an online article, Bailenson has also pointed out that another function for VR in the present day and the near future world would be news reporting. He suggests that in ten years' time, people might be personally experiencing news events instead of passively watching them on TV (Stark 2014). The same article describes a VR experience of witnessing the beating to death of an illegal immigrant, a real-life event translated into a virtual news item, and the effects of the experience on the viewer. In November 2013, the popular science magazine *New Scientist* reported that it had now become possible to simulate tastes (Marks 2013). The article drew an immediate conclusion that gamers and 'VR explorers' might soon be able to taste simulated food on their VR or traditional computer equipment. In April 2014, an article in the same magazine discussed the new enterprise by the creator of *Second Life*, Philip Rosedale, called High Fidelity (Murphy 2014). The article quotes Bailenson's assertion that much of the original virtual reality, as well as *Second Life*, ultimately failed because of the poor quality of the available graphics at the time. The article wonders if High Fidelity's extremely quick rendering of graphics and the subsequent resemblance to reality does not lead to the so-called Uncanny Valley.[7] In the article, Rosedale quips, 'We like to say we are crossing the Uncanny Valley and getting away with it' (http://www.newscientist.com/article/mg22229664.000-second-life-20-virtual-world-recreates-the-real-you.html#.VEJ-nIvF-A0 [Accessed 18 October 2014]). The implication seems to be that the users of today are more able to psychologically handle artificial representations of humans than those in previous decades.

In a concrete example of the development of technology for 3D virtual worlds, in March 2014, Sony announced 'Project Morpheus', a headset for the upcoming PlayStation 4 games console. Oculus Rift, already mentioned in the Introduction, is another, currently more visible example. When Facebook bought Oculus Rift for two billion dollars in March 2014, the official announcement stated that 'virtual reality technology is a strong candidate to emerge as the next social and communications platform' (Facebook press release, 25

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[7] For details on the concept of the Uncanny Valley, see Ch. 4, p.120.

March 2014). Subsequently, the Oculus Rift CEO Brendan Iribe has suggested that such a new kind of social media platform could be a 'Metaverse' that joins separate virtual worlds (Hollister 2014). The term was recognised by his audience at the TechCrunch event at which he made his speculation, and described by Mark Wilson on *Fast Co Design* online magazine as 'a concept from Neal Stephenson's book *Snow Crash [...]* I guess it's like Snapchat or texting works now, but in photorealistic 3-D' (http://www.fastcodesign.com/3030126/facebook-really-is-building-the-metaverse [Accessed 18 October 2014]). The connection between our currently available technology and virtual reality is suggested in an article by the *New York Times* technology reporter Farhad Manjoo as a key to the renewed interest and optimism in the commercial success of virtual reality (Manjoo 2014). Having visited Stanford University's Virtual Human Interaction Lab, Manjoo argues that the public will embrace the new kind of virtual reality because he sees it as the natural extension of every major technology we use today. He suggests that it will be used for the same purposes as the current technology: learning, communication and entertainment. Further, his article points out that the development of mobile technology has brought down the cost of powerful displays and tracking components necessary for VR headsets.

In addition to virtual reality headsets, augmented reality has also been taking steps forward. In a January 2014 issue of *New Scientist*, Sandrine Ceurstemont, experimenting with the Oculus Rift headset, calls a version of augmented reality a 'mixed reality', which blends physical and virtual elements. Also in 2014, Google's Niantic Labs published Ingress, a smartphone app, which has become an early real-world example of an augmented reality game like the ones featuring in *Halting State*. It involves several fictional personae and fictional companies, many of whom post in-character material on the internet. The game itself assures the player that it is not a game and that the events described in it – the struggle for alien portals for the fate of humanity across the world – are really happening. Players must interact with the real world, even if it is (so far) only in terms of covering the physical distance from one portal location to another, in order to play the virtual game. Although the borders between the virtual and the real are still easy to distinguish, for the moment, the beginnings of their blurring can already be discerned. It remains to be seen how the introduction of the Glass headwear by Google will influence this game, and many likely others.

The economic and societal concerns of *Cosmopolis, Air*, and the crime-related aspects of works such as *Halting State* and *REAMDE*, owe a lot to *Neuromancer* and the cyberpunk genre generated by it. The early works were both fascinated by and wary of the new technology, which seemed to bend the limits of reality much like mind-enhancing drugs. The effects and consequences of drug addiction: crime, displacement, loss of identity, shattered societal structures, were applied to a world apparently on the brink of addiction to the virtual. From the antiheroes and dystopian settings of the early texts, it has been logical to extend texts on virtual technology towards with more contemporary, mainstream, issues, such as the intrusion of the media or the effects of technology on economy. While the days of the cyberpunk style are mostly past, literary narratives of the virtual, as listed above, generally remain fairly dark. Aside from their major themes, today's narratives typically touch upon issues such as climate change, political questions, or individual concerns such as identity or psychological troubles. As will be seen below, despite its contemporary mainstream presence in today's society, the virtual remains an Other, far more likely to be connected to negative rather than positive attributes.

4. The alien virtual in William Gibson's *Neuromancer* (1984)

William Gibson's novel *Neuromancer*, first published in 1984, was the first work of fiction to present a comprehensive notion of a new kind of space 'behind' the computer screen. Unlike the film *Tron*, the novel's contemporary, this 'space' did not assume the user being accidentally absorbed into the mysterious inner world of the computer terminal itself. The space envisioned by the novel extended out between computer terminals, into a network between them, in which it was possible, and reasonably ordinary, for more than one user to be present at any given time. Gibson, who was not himself a computer user at the time, conceptualized the space from his own personal visual experience of observing others play arcade games. His translation of the youngsters' immersion in the simple games into a notion of a virtual space, which exists alongside the mundane, physical space, but, at the same time, remains separate from it, quickly solidified in popular culture and media. The rationale of using the novel as an example of virtual ekphrasis is justified in two ways. Firstly, the novel represents artificial visual representation, the virtual dimension called cyberspace, or the matrix, by means of verbal representation. Secondly, the novel's origins are directly based on a situation in which inspiration is triggered by a visual experience that relates to digital technology.

Curiosity about the new technology in the early 1980s meant that the novel struck the zeitgeist nerve and gained praise despite its lack of any particularly notable literary qualities. Little about the presentation of the text is radical. The narrative is told in the conventional past tense, divided into chapters, with the protagonist Henry Case as the sole third-person point of view. The monofocalization is taken to such an extent that even when the major female character, Molly, appears in narrative terms as the more active party, Case is still able to perceive through her senses using a particular technological enhancement. Because of such an exaggerated focus on Case, he initially appears as a typical representation of the Lessingean male-dominant-viewer spectrum from the perspective of ekphrasis. Indeed, suggestions on the dangerous captivating power of the feminized image seem to be confirmed, as Case is eventually forced to deal with a new kind of virtual, in which he is tempted to remain by the virtual ghost of his former girlfriend. As McCallum

(2000) has pointed out, *Neuromancer* is not a postmodern text despite the occasional arguments to that effect. Most of the action takes place in the novel's mundane world rather than in the virtual domain, as the characters traverse the globe and the near space in search of answers.

Case is a young man down on his luck in a world that is futuristic, but still clearly within reach of the present of 1984 in terms of its political and economic 'future history'. Formerly a 'console cowboy' (in today's terms, hacker) working in cyberspace for powerful corporations, Case lives on petty crime and drug abuse in the city of Chiba in Japan after crossing his former employers. As a sanction, he was rendered unable to access cyberspace. His inability to find a cure for his condition acts as the initial motivation for him to engage with the plot as its protagonist. After his girlfriend, Linda Lee, is murdered, Case is sought out by a mercenary, Molly, and hired by the mysterious Armitage to conduct an unclear heist job in exchange for the cure he needs. In the process, Case and Molly are joined by the digitally recorded personality of Case's late mentor, 'Dixie' McCoy Pauley and an assortment of other shady characters. In the end, Case discovers that Armitage is a puppet for the AI Wintermute who is seeking to unite with another of its kind, called Neuromancer. Case is brought in as a 'chosen one' to aid with the process, and, as his task becomes almost a spiritual quest, eventually he is invited to choose between the virtual and the real, with the virtual ghost of Linda as his prize in the virtual domain.

Despite the technological trappings, the plot and the characters of the novel were not particularly innovative even in its own day, and certainly not from the perspective of 2014. As discussed in more detail below, the novel employs a number of intertextual elements from popular culture and mythology in what becomes the beginning of a modern literary myth, repeated in later texts influenced by *Neuromancer*: the defeat of a modern, computer-generated threat by a young male with social difficulties but with a great deal of programming talent and skill – a glorification of stereotypical 'geekdom'. The familiarity of the intertextual aspects of the novel functions to balance out the unfamiliarity of the concept of virtual space. Neither Gibson's expected audience nor the author himself were experienced in computer use. Consequently, although the virtual presented in the novel is very far in every manner from the realistic level of technology of 1984, the fantastical

nature of *Neuromancer*'s virtual technology did not impede the readers. As the readers could not be expected to know much more than the author, the novel was free to invent and play around with innovative concepts.

As will be seen in Chapters 5 and 6, such level of imagination would have been more difficult to present in a later text without detaching the fictional setting completely from the novel's contemporary setting. If an author of the 1990s or the 2000s made a mistake in describing actual technology, or deducted from contemporary technology in a direction that could be perceived as unrealistic, large parts of the expected audience would have had a sufficient level of expertise to object. Without restricting mental schemata based on the real world expectations of technology, the first cohort of readers of *Neuromancer* were able to use techniques of ekphrasis and reader-response theory, mental visualization and actualization, much more freely than the readers of later texts. This freedom to visualize would have required highly complex mental processes, as indirect immersion had to be produced without the supporting background knowledge and experience. Bolter's accusations of lazy escapism seem unfounded. This chapter will focus on the ekphrastic strategies used to represent the virtual at a time when the virtual was barely there. Further, it will discuss the attitudes towards the potential of the new kind of 'space' fully invoked in this novel for the first time.

4.1 Creating a new space out of images through inspiration, influences and inter-textuality

In interviews and discussions with his audience, Gibson has openly noted that, in the early 1980s, he had little knowledge about computing and was not in a position to own one of the newly available expensive personal computers himself. Most of his readership would have been in a similar situation. Despite its general unaffordability in an average domestic context, personal computing was visible to the public through advertising and through entertainment such as cinema, and, since the late 1970s, arcade video games. The film *Tron*, as an example of the presence of computing in cinema, also centres its plot around an arcade game. For Gibson, the inspiration for virtual space occurred in two personal visual experiences, which he has discussed in interviews such as those with L. McCaffery (1991)

and D. Wallace-Wells (2011). In the first instance, he saw children play old-fashioned arcade games in the early 1980s. He was so impressed by the focus of the children on the games, their immersion and physical involvement in them, that, he says, it seemed to him that the children were in a different space, a notional space behind computer screens. Around the same time, he also saw an Apple advertising poster depicting a businessman's arm holding a computer. The picture spurred him into believing that everyone would want a computer, and to live 'inside them'. Gibson's visual experiences in the real world became the basis for the idea of cyberspace. At the time when personal computing was only gradually becoming commercially available, and most computer programmes presented text, or only rudimentary graphics, *Neuromancer* envisioned the upcoming transition from a virtual in the form of abstract geometrical shapes to a virtual of concrete, realistic representations of real people and places.

In being inspired by visual experiences, the novel follows the modern definitions of ekphrasis. Yet, while one of the original inspirational situations was Gibson viewing a work of visual art (the advertising poster), the other situation was not a representation, but a scene from real life. While the tradition of Classical ekphrasis allows ekphrasis to represent any kind of a multisensory scene, the common element between Classical and modern views on ekphrasis is that the verbal delivery represents the original visual. Neither of the original situations is in any way obviously represented in the novel, although games arcades do make an appearance a few times. Yet, Heffernan has observed that modern ekphrasis, even in its representation of a particular visual representation, can move away from the original object and imagine a narrative inspired by the visual. The motif of the shield of Achilles in the *Iliad* and the Grecian urn admired by Keats both inspire related narratives in their respective ekphrastic texts. We can say that in such cases, the original objects take the role of the 'reflecting device' to produce their own 'virtual narratives', to use the terminology suggested by Ryan. In the case of *Neuromancer*, as with the other two novels examined in subsequent chapters, the ekphrastic process bypasses the step of naming and representing the original visual directly. Instead, it moves straight on to the narrative expanded out from the original visual. Therefore, in *Neuromancer* and in the other texts analyzed in this thesis, ekphrasis functions on several levels: in the entire text and its

creative process, and in a narrower way, in the instances of the evocative descriptions of the respective virtual worlds.

Gibson's ekphrastic expansion from the original visuals into a narrative focused on the creation of a new kind of space requires examination of the ways in which space in general is treated in the text. The novel is set at an indeterminate point in the near-to-intermediate future, after an unnamed and undefined war. As Gibson wrote from the perspective of the Cold War climate of the 1970s and early 1980s, the fictional war is noted to have involved at least the United States and the Soviet Union. The fictional space of the novel is attributed elements from the author's actual reality, in terms of the wariness and outright fear of an armed conflict between the two superpowers, present in his contemporary media and society. In the text, the winner of the war is left unclear, but the war has created a new world, in which the characters of the novel appear adrift. The new, corporate-dominated world is presented in strong terms of urbanity, science and technology. Such an apogee of artificiality and technological innovation is shown as ripe for the emergence of entirely new living beings from the matrix of cyberspace. The concept of technological progress is anthropomorphized in the text as artificial intelligences (AIs), who are set apart from and against humanity as modern interpretations of supernatural beings.

The novel structures its plot on the concept of travel from one place to another, physical to physical, physical to virtual, or from one kind of virtual to another, as Case is forced by the AIs to depart the familiar abstract cyberspace for a new representational one. The driving force in the plot is Case's desire to regain permanent access to cyberspace. In the novel's mundane world, Case, his companions and opponents travel from Japan to North America, Europe and eventually to space stations orbiting Earth. Each stage on the physical journey – each new place – brings Case closer to his goal and increases his understanding of the nature of cyberspace. Despite Case's initial antihero status, with his drug addiction and history of crime, the plot recalls the 'hero's journey' motif, put forward in 1949 by Joseph Campbell (1993), by requiring a complex multi-stage process through a series of locations, mental challenges and opponents before leading to the fulfilment of the quest via a transformation of the hero.

McCallum (2000) has criticized the reliance on traditional adventure narratives based on physical travel in the texts that are usually credited as postmodern, such as works dealing with virtual space. The issue she takes with such texts, like *Neuromancer*, is that they may posit the possibility of freedom from physical location and offer the potential for multifocalization and other similar innovative features, but they generally fail to actualize this potential, in favour of the stereotypical plots and characters. McCallum's observation, based on the texts published before 2000, is fair. *Neuromancer*, certainly, demonstrates this paradoxical interconnection between the virtual freedom from physical space and physical travel in real-space. Further, as will be seen in subsequent chapters, McCallum's criticism can be extended to these texts' general valuation of the physical over the virtual in general. As discussed below, despite his initial addiction to cyberspace and his desire to be permanently reunited with it, Case goes through an enlightenment of sorts in the representational virtual space and ends up choosing the physical instead of the virtual.

Partly, the resistance to the potential of the virtual has likely been due to the genre expectations as noted by Keunen in his discussion about Bakhtin's chronotope. As will be seen, all the texts discussed in this thesis acknowledge escapism as a significant element in the dealings with the virtual. To some extent, the same escapism must be present in the fiction itself. Just as the expectations of the reader's aid in the process of mental visualization of the events and features described, they also assist in the overall reading process. Each sub-genre of prose fiction – romance, fantasy, science fiction, and so on – has its own repeating features. Ironically, although Gibson wanted to create something new with *Neuromancer*, his plot and characterization are strongly rooted in the traditional. Case's name and situation recall American *noir*: the authors Dashiell Hammett, James M. Cain and Raymond Chandler, their maudlin detectives and other drifting individuals suddenly forced into action, as well as others in literature and cinema, such as *Casablanca*'s Rick, who have fallen from grace into various bitter self-imposed exiles in exotic locations.

The comparison to *noir* is supported by the novel's several flashbacks, dark imagery, dialogic exchanges between characters that vary from effective one-liners to dramatic expositions of past experience, and by the female characters of Linda and Molly. Linda

Lee, Case's former girlfriend, murdered in Chiba, creates an additional layer of distress-fuelled motivation to Case, following their troublesome relationship and her subsequent death. Her simple alliterative name invokes American superhero girlfriends, the muses behind heroism and the frequent damsels in distress, such as Superman's Lois Lane, Spiderman's Mary Jane and Iron Man's Pepper Potts. Molly, a mercenary, whose name creates an instant association with a 'gangster's moll', is Case's *femme fatale* in a literal sense, with her technologically enhanced senses, reflexes and razor-sharp retractable blades inserted into her hands. Her blades form another association with the world of superheroes, namely with the similarly-equipped Marvel character Wolverine.

Molly acts as a catalyst in the plot by stirring the plot elements into an active narrative. Like so many of *noir*'s *femmes fatales*, she makes her formal entrance by intruding the male protagonist's own personal space, offering employment. The motif of a difficult, but, on success, impressive, criminal act, viewed from the perspective of the perpetrators, introduces into *Neuromancer*'s literary landscape the idea of the heist narrative, familiar from numerous novels and films, such as the *Saint* series, *The Italian Job* and *Ocean's Eleven*. The reader will know to expect a gathering of a team of experts, exotic locations, and twists in the plot, as the intended heist becomes something else, and/or as the employer turns rogue. As the plot develops and Case's motivation to restore his health and access to cyberspace becomes a spiritual quest of sorts, further literary elements are brought in as numerous mythological references and allusions.

Case's enforced separation from the matrix as a punishment for a trespass against his masters has connotations of the fall of Adam and Eve in biblical mythology, and of Dante's reflections on the fall of Lucifer in *The Divine Comedy*. Case 'fell into the prison of his own flesh' (p. 12), which has strengthened his Cartesian attitude towards the body as inferior to the mind, ostensibly free from the confines of the body in cyberspace. The redemption Case seeks becomes available from the AIs, who are depicted ambiguously as benevolent quasi-divine figures and as deceivers at once. They are compared to demons, with whom 'men dreamed of pacts' in the past, but 'only now are such things possible' (p. 193). The point of view directly expresses the fear of new technology coming at a great cost to humanity, despite its enabling things of which people may have dreamt for

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centuries. Wintermute, once called 'A lord of hell, surely' (p. 221), displays a cynical self-awareness of its relation to humans by enquiring of Case, with a biblical reference to God, 'You want I should come to you in the matrix like a burning bush?' (p. 202). On the space station of Zion, Case is explained to by its Rastafarian cultist inhabitants that Wintermute has chosen him 'to serve as a tool of Final Days' (p. 136). In the course of the narrative, Case becomes the chosen one, a devoted mythical knight figure on a quest for the metaphorical Grail.

The novel's title indicates the bringing together of the old and the new. 'Neuro-mancer', a nerve-wizard, acts as reference to the mode of accessing cyberspace in the text, as well as carrying allusions to the Greek *oneiromancer*, one who explains dreams, and to the *necromancer*, one who deals with the magics of death. Another reading, 'Neu-romancer', a new romance, creates an association with the Medieval and Medieval-inspired romances of knights and their quests. The evocative title carries several layers of meaning and sets the reader's expectation toward something old and something innovative, something that combines modern science and ancient superstition from the beginning. The expectation is fed by the novel's futuristic and technological features together with the mythological allusions. It is fulfilled at the end, as the title is revealed to refer to one of the artificial intelligences (AI), native creatures of cyberspace with near-godlike powers.

In making use of familiar mythological elements, Gibson also came to establish the ground for a modern literary myth. Some of the features invented or reshaped by Gibson have since become new genre features that can be reasonably expected in subsequent works about the virtual. One such feature is the introduction of the 'superprogrammer' motif. Case, the first embodiment of the motif, is a young man with the characteristics of an expert, who is far more interested in applying his skillset than in any social interactions or in the conventional expectations of society. Partly, the character of Case is a product of the drug culture of the 1960s (McCaffery 1991) but he is also already recognizable as a 'geek' of the later internet culture, who favours his obsessive personal interests over human interactions. Throughout the novel, Case deals far better with virtual space than with the mundane space. Contrary to his confidence and expertise in cyberspace, he appears constantly somewhat confused, passive, and dependent on the orders and advice of others in the physical world. Molly acts

as the one who is capable and active in the mundane world. She comes to establish the precedent for the 'female sidekick' motif also evident in later texts. She has little knowledge of or interest in cyberspace, but her function is to support the male hero in his endeavours. The Lessingean division between male and female qualities is still present in the characters of Molly and Case, although in an updated format. While here it is the female who is active in the physical world and the male who is passive, it is still the female who embodies bodily qualities – in this case, athleticism, sex, and violence – and the male who dominates the realm of the mind. Case's talents lie in the skills of his mind, not in the physical feats of traditional adventuring heroes. His activity belongs in the virtual space, where he is able to be in control using his skills, until the AIs interfere and introduce him to a new kind of cyberspace, in which abstract forms have been replaced by realistic representations.

As someone whose identity is primarily tied to a non-physical space, Case is presented as discontent and detached from his physical surroundings. Although Case is seemingly only concerned about his separation from cyberspace, his physical home is frequently mentioned. His two 'homes' are juxtaposed early on in an explanatory flashback. As it is observed that Case still dreams of cyberspace after a year in Chiba, the 'Sprawl was a long strange way home over the Pacific now' (p. 11). The subtle mentions of the Sprawl indicate that contrary to appearances, at least some of Case's identity is bound to his physical home. Nonetheless, his loss of identity is portrayed simply in terms of the loss of the virtual. '[H]e was no console man, no cyberspace cowboy. Just another hustler, trying to make it through' (p. 11). He associates only with other expatriates, many of whom are depicted in stereotypical terms. Associations created with the Eastern Bloc are militaristic and cold. A bartender's teeth are specified as containing East European steel, with his arm a Russian military prosthesis. His customers include a tall African with tribal scars and a loud drunken Australian. The stereotypes, set within a bar, serve to create a pseudo-space separated from the surrounding Japanese space. The bar and other Western-style establishments in the city appear as gathering places to the local Westerners, as vague, unfulfilled attempts to connect with their home culture. The space of alienation within a foreign culture reflects Case's situation as an exile in the physical world, within which he is as much of an outsider as the Westerners are in Chiba.

In addition to exile from a homeland, Case's separation from cyberspace is indirectly likened to drug withdrawal and to a separation from a lover. He is introduced to the reader via a joke he overhears, which also defines Case himself. 'It's not like I'm using […] It's like my body's developed this massive drug deficiency' (p. 9). The mind of Case, in the meantime, is suffering from a massive cyberspace deficiency. Case continues taking amphetamine and cocaine until, in the temporary restoration of his cyberspace access, his body is rendered incapable of metabolizing them. Drugs and cyberspace become two sides of the same coin. While Case is unable to access cyberspace, he has transferred his addictive mindset to feed on another, less satisfactory source. With the access to cyberspace restored, the road to chemically-induced stimulation is blocked. The equation between drugs and cyberspace is taken further as the latter is described as a 'consensual hallucination' (pp. 12, 67). Without access to the right kind of hallucination, Case cries in his sleep through nightmares, only to 'wake alone in the dark [...] trying to reach the console that wasn't there' (p. 11). The wording of seeking comfort in bed at night from something that is no longer there resembles an individual trying to reach a lost lover. Cyberspace is established as not only Case's spiritual home, but also as a space of great intimacy, comparable to the presence of a lover.

The virtual in Gibson's novel is not yet a well-defined 'world' intended for human interaction. It is the human experience of a global information network. There is no interface between the human user and the data stored on the computer. The data, which belongs to financial or military institutions, manifests as abstract, geometrical forms. The user is able to directly manipulate it in cyberspace. When a user wishes to log in, he (there is no indication whether female 'console cowboys' exist) pulls on a headband containing several 'dermatrodes' that rest on his forehead. This direct neural connection, invented by Gibson, is connected to the 'deck' of a computer by cables. The user closes his eyes and perceives cyberspace in his mind's eye in a dreamlike manner. The narrative makes a brief stop, in a very Kriegerian manner, to explain to the reader that cyberspace is 'A graphic representation of data abstracted from the banks of every computer in the human system […] Lines of light ranged in the nonspace of the mind, clusters and constellations of data' (p. 67). Once the '3D chessboard' of the matrix grid opens around Case, he sees 'the

stepped scarlet pyramid of the Eastern Seaboard Fission Authority burning beyond the green cubes of Mitsubishi Bank of America' (p. 69) and the military spirals outside his reach. The concept of representation is taken to extreme: concrete, complex concepts are depicted as simple shapes of colour against a grey background. Whilst connected to cyberspace, the user cannot perceive anything that takes place in the user's physical environment. Cyberspace is presented, initially, strictly as a realm of the mind, in which the users achieve a metaphysical bodiless existence, while the real world remains the domain of the body, senses, emotions, pain and bodily needs such as physical addiction.

4.2 The first transformation: Case returns to cyberspace

Case's physical existence in Chiba is presented as a state of stagnation. Little changes, there is no hope for the better. Events are brought into motion by the arrival of Molly in her role as the plot catalyst. As Case's nerves are restored to the stage at which he is again able to access cyberspace, the text begins to approach its first passage that can be identified as an example of virtual ekphrasis. It is the first glimpse of cyberspace offered to the reader, who, throughout the novel, only 'sees' through the point of view of Case. In the strict monofocalization, Case's emotions of depression at his withdrawal, addicted anticipation at the prospect of his return to cyberspace and his ecstatic arrival guide the responses of the reader, but the third-person past narrative retains a certain level of detachment. The reader remains an observer of Case's activities and emotions, but is unlikely to fully experience them for him- or herself. Consequently, the first ekphrastic passage relies greatly on poetic language and effects to increase the sense of indirect immersion.

In advance of Case's return to cyberspace, sexual intercourse between him and Molly takes place. The relationship between the two characters is curious. They never develop a romantic relationship, nor is Case described as feeling any particular emotion for her. It is as though Case's distaste for 'meat' almost extends as far as physical pleasures. The 'cowboys', hackers, regard the incorporeality of cyberspace as a superior state of being. A technology known as 'simstim' enables a user to directly experience the sensory input experienced by another person. Case and his colleagues consider simstim 'a meat toy' (p. 71), which pays excessive amount of attention to the body: 'He knew […] that the

cyberspace matrix was actually a drastic simplification of the human sensorium […] but simstim itself struck him as a gratuitous multiplication of flesh input' (p. 71). Although cyberspace itself is perceived through the human senses, Case feels that the use of technology specifically with the purpose of experiencing bodily sensory input is questionable, in a Cartesian separation of mind/higher functions/higher state and body/lower functions/lower state.

The sexual relationship seems unconnected to the rest of the plot until examined from a mythological perspective. Case has just recovered from his surgery to restore his nerves. Molly, the plot catalyst, here acts as a gatekeeper of sorts. In the Sumerian and Babylonian mythologies, as written down in the epic of Gilgamesh, the wild Enkidu is transformed from a savage into a civilized man by means of intercourse with the prostitute Shamhat. Molly, who is another woman for hire for her body, once for sex and now for her security skills, concludes his transition from exile back to what the 'console cowboys' consider civilization: cyberspace. Significantly, it is cyberspace to which Case's sexual satisfaction is directly compared: 'his orgasm flaring blue in a timeless space, a vastness like the matrix, where the faces were shredded and blown away down hurricane corridors' (p. 45). The sexual comparison foreshadows Case's ecstatic reaccess to cyberspace further on in the text.

From the perspective of Heffernan's interpretation of ekphrasis, Case's intercourse with Molly on the threshold of the subsequent ekphrastic passage is a highly relevant event. Molly is not a passive female; indeed it is she who initiates the sexual encounter in a manner that would be questionable if a male character were conducting the same act. Case does not resist, instead, he is clearly pleased, but his opinion on the matter is not enquired about. We know he is an addict to cyberspace. A reading through the traditional theoretical frame of the relationship between the viewer and the image would therefore suggest that the prospect of cyberspace, embodied in Molly, is so attractive to Case that he is in the state of thrall-like fascination, helpless before the appeal of the dangerous image. Case, whose programming skills in cyberspace are essential for his wellbeing, is not yet restored to the use of those skills. The programming skills give him control in the visual space of cyberspace, but here, when he does not yet know whether the restoration of his ability has

worked or not, it is the prospect of the visual space – the prospect of the image – that is controlling him.

This first ekphrastic passage is short in comparison to the later ekphrasis, discussed below, but it has several important functions in its use of poetic language and rhetorical techniques. Crucially for ekphrasis, the poetic evocation is by no means necessary from the perspective of the plot. In narrative terms, it would be enough to state plainly that Case's re-entry to cyberspace was successful. Nonetheless, this passage focuses on the situation in great detail. It conveys to the reader the importance that Case attributes to his personal relationship with cyberspace, thus establishing his motivation in the narrative. It strongly evokes the features of what Case considers to be 'normal' cyberspace, abstraction and bodilessness, in order to create effective contrast further on, when Case enters the representational cyberspace created by the AIs. It also transforms the factual description of cyberspace given previously, which is entirely reliant on technology, to a concept that can be experienced by humans in a strongly positively emotional manner. Crucially, the passage also transforms Case himself. By re-establishing his identity with his significant space and by retaking control over the visual through his programming skills, he shifts from depression to joy, passivity to activity within cyberspace, pointlessness to purpose, and, to a degree, from helplessness to control; although, as the subsequent ekphrastic passages show, a large part of that control is illusionary.

Neuromancer cannot yet expect that the implied reader should guess what is happening when Case 'jacks in' to cyberspace. Yet, the text does not dwell on long plain descriptions of the technological equipment, although it acknowledges its presence and its necessity for the access to cyberspace. Case's actions are required for the narrative to shift to the virtual domain. These actions are denoted throughout the text by active verbs such as 'he took the trodes off' (p. 69), 'he jacked in' (p. 99), and 'jack out' (p. 141). Despite the fact that the action of 'jacking in' is followed by Case closing his eyes and experiencing cyberspace as though it were a vivid dream, the events are not his imagination. In her eight-step identification of virtual worlds represented in fiction, Ryan has noted that the entry to the virtual world requires an act of active embodiment. Even at this early stage of the representation of the virtual in text, the dependence of the access into virtual on human

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actions is clearly visible. In the current passage, Case's transition from the mundane into the virtual is marked by short, incomplete sentences, set on their individual lines. The incompleteness of the sentences and the lack of full paragraphs create a sensation of anticipation, holding one's breath in preparation:

> He closed his eyes.
> Round the ridged face of the power stud.

The 'ridged face' of the device provides another evocation of physicality. The incompleteness of the second sentence creates an impression that Case closes his eyes, rather than his hand, around the power stud. Even as the transition requires deliberate physical action from him, it also marks a change in the process of gazing. Case's visual input shifts from his mundane world to the virtual. The text makes a very subtle implication that the transition is controlled by the power of the gaze as much as by the physical motion. The two lines play with the concepts of touch and gaze, bringing them together in a Blanchotian manner. The gaze, 'touch over a distance' and physical touch become one.

As the first indications of cyberspace appear, the two short lead-in sentences are followed by two longer ones. Both appear as fragments to represent the ongoing anticipation and the increasing movement of the visuals from the darkness of the closed eyes:

> And in the bloodlit dark behind his eyes, silver phosphenes boiling in from the edge of space, hypnagogic images jerking past like film compiled from random frames. Symbols, figures, faces, a blurred, fragmented mandala of visual information.

The fact that the visual perception in cyberspace requires closed physical eyes is highly ironic. Despite the notion that entry to the virtual requires technological equipment rather than just pure imagination, here, the virtual space literally becomes the user's mindspace. The 'dark behind his eyes' recalls Gibson's description of his own envisioning of a space behind the screens of the arcade games. The vocabulary of 'phosphemes', 'images jerking past like film' and 'a blurred, fragmented mandala of visual' evoke images of grainy TV and film footage and newspaper images, which strengthens the sense of artificiality and experience of constructed visuals.

In *Neuromancer*, the users do not have virtual bodies. They are 'present' in cyberspace as incorporeal points of view, with their consciousness intact, but only aware of their virtual surroundings. The sense of movement within cyberspace occurs by shifting the incorporeal point of view in three dimensions at varying speeds. Although cyberspace appears as an infinite transparent grid, it still presents an impression of depth and perspective. In this passage, the sense of depth is not created by Case's own movement, but by the 'unfolding' of cyberspace around him. A perspective, of sorts, increases the sense of surrounding space: '[H]igh and very far away he saw the spiral arms of military systems, forever beyond his reach.' (p. 69) In text, the sense of movement is evoked by further short sentences, situated on separate lines and fragmented to the point of only consisting of one word here and there. The variation of the lengths of sentences and the plentitude of punctuation used, together with verbs of movement, lead to the creation of a pulsing verbal movement. Following the indirect speech, 'Please, he prayed, *now*' – with the '*Now* –' repeated on a separate line, the immediately following lines form an orgasmic effect of fulfilment, with their alliterative vocabulary of 'flowed – flowered – fluid – unfolding' of subtly erotic connotations:

> Disk beginning to rotate, faster, becoming a sphere of paler gray. Expanding –
> And flowed, flowered for him, fluid neon origami trick, the unfolding of his distanceless home, his country, transparent 3D chessboard extending to infinity.

The fulfillment expressed in these lines, reminiscent of Case's sexual intercourse with Molly, focuses on Case's experience of return to 'home'. More than 'his distanceless home', cyberspace is even 'his country'. An exile in the physical world amongst those who have also left their mundane places of birth, Case's self-image as a citizen of cyberspace is actualized on his return.

The ekphrasis ends before the reader learns what Case actually does in cyberspace, following his re-entry. The passage has emphasized the transition and its effects, without any purpose to demonstrate Case's subsequent actions. By focusing on his affective experience in the transitional space between the mundane world and the virtual, the ekphrasis highlights the division between the two. Specifically, it draws attention to the unreliability of Case's attitudes concerning the two worlds. Although Case appears to revel in the bodilessness of cyberspace, the experience is evoked in a sexual manner, as an

indirect continuation from his initiatory intercourse with Molly. His post-orgasmic state of relief and bliss is emphasized in the closing lines of the ekphrasis of the passage: 'And somewhere he was laughing, in a white-painted loft, distant fingers caressing the deck, tears of release streaking his face' (p. 69). Although Case's perception and his physical body are seemingly separated, his experience in cyberspace leads to a physical reaction in the mundane space. Despite the attempts of the 'console cowboys' to keep the world of the flesh and the world of the mind separate, an interdependent connection is demonstrated.

4.3 The virtual as an uncanny space

In his interview with Wallace-Wells (2011), Gibson extensively discusses his creative process. As part of his own desire to add something new to the American science fiction that he found stale and jingoistic, Gibson wanted to create a new literary space that would make the reader feel constantly slightly disoriented, as though in a foreign place. The numerous neologisms, portmantenaus and uses of familiar words in unfamiliar ways are all part of Gibson's strategy towards readerly disorientation, which he calls 'that pleasurable buzz of feeling slightly unsettled'. As a likely result of his own unfamiliarity with computing, Gibson invented several neologisms, some of which were adopted into general use in media, culture and science. Examples of these terms include 'cyberspace' itself and 'virus program'. Others, such as 'razorgirl', 'street samurai', 'matrix deck' and 'dermatrodes' have remained confined to the textual space of the novel, but, at the same time, they function as distinct identifiers of the text and its culture. Gibson's term 'the matrix', signifying the structure of cyberspace and used as a synonym to the text's virtual space, was adopted as the title for a popular trilogy of films concerned with virtual reality at the turn of the 21st century.

In ekphrasis, choice of words is of critical importance, as the connection with the reader depends on whether the reader is affected by the words in the desired manner. In the novel, the neologisms are presented without explanations, which allows the reader to work out the meaning from the context, as with a foreign language. The effect of the strange words might be expected to alienate the reader and to reduce immersion, as per the suggestions by Ryan that familiarity creates more effective immersion. However, much of *Neuromancer*'s

appeal may have had to do with its combination of the familiar and the unfamiliar. Burke, already, notes that certain amount of unclarity increases the reader's fascination with the material. Similarly, Ingarden and Iser emphasize that the reader must have space for his or her own imagination to fill in gaps and actualize further from the text, even if the mental tools for the process are dependent on the reader's previous experience. Another textual tactic used by Gibson towards the end of the readerly unsettledness is the frequent use of abrupt breaks and shifts in the narrative, adopted from J.G. Ballard, one of Gibson's influences. The purpose of the disorientation is aesthetic and artistic: to creature pleasure resulting from the process of reading. The use of carefully chosen words to create a desired response in the reader is a rhetorical technique familiar from ekphrasis.

The sense of disorientation, for which Gibson strives, reflects the likely broader attitude about new computing technology. Its prospects, even as fantastical and removed from contemporary reality as those proposed by Gibson were, would have been bewildering, perhaps even partially frightening, as much as they were fascinating. We can speculate that, in this sense, technology may have assumed the dualistic fascinating/unsettling role traditionally assigned to the image. Like the image, technology was suddenly on the point of producing or proposing new kind of notional spaces, which could be imagined and/or perceived, but not reached in any kind of tangible, concrete sense. In theoretical terms, the inability to reach a space presented or posited by technology would have created the same kind of frustration as outlined by Blanchot. *Neuromancer* begins by portraying cyberspace as a realm of incorporeality and bliss, but even the initial depiction implies more negative connotations through Case's addicted state. As the narrative progresses, the more unsettling, alien, aspects of cyberspace are brought to light. The disorientation is the most evident in those passages that concern Case's encounters with the representational cyberspace and his concurrent physical 'deaths'. The illusion of the division of mind and body is shattered, as it is demonstrated that strong virtual experiences also affect the user's physical body. The new artificial, visual space now presents an outright danger, another quality that is associated with image in traditional interpretations.

This alien aspect of cyberspace is represented by the AIs Wintermute and Neuromancer. Originally created by human skill, they have achieved sentience and near god-like power,

with the ability to affect technology in the mundane world and to shape the virtual into new representational forms. In the narrative, they function in an ambiguous role, partly as opponents, partly as guides and mentors. Through their actions, Case gains a new understanding of the virtual, completes his transformation and is able to make his final choice, even if, ironically, his choice is contrary to the AIs' wishes. The most significant examples of ekphrasis in the novel, discussed below in detail, occur in relation to the representational virtual space, created by the AIs. Before moving on to explore Case's experiences in the representational cyberspace, it is worth discussing the relevance of the AIs as manifestations of the alienness of the virtual.

The main conflict in the text is not that between Case and the corporate aristocracy who hold in their possession the data that is required to accomplish Case's mission. The personal conflict between Case and the AIs emerges as a fragment of a greater one: that between a virtual controlled by humans and an ineffable virtual beyond human control. In terms of the framework considered in this thesis, that conflict can be viewed as one between a visual controlled by humans, and a visual that has achieved its own sentience, its own power, and which has passed from under the 'safe' human control. The artificial, the representation, has become anything but a passive and silent. The representation has taken on an active agency, which unsettles and terrifies the humans who have been stripped of their unique position to create representations. The human control is threatened by the power of the AIs. The artificial/image/visual that the AIs are supposed to be has crossed the border and actualized itself. The AIs are no longer representations, but the representations have become real. They have taken the third step in the ekphrastic process as put forward by Mitchell, realizing the ekphrastic fear by uniting the representation and the real.

From the geocritical perspective, the AIs act as endogenous points of view, as fully native entities of cyberspace. They embody the unknown, the ineffability of the proposed new kind of space. It is they who transform the abstract cyberspace into fully non-abstract and demonstrate a creative ability previously only displayed by humans, and, according to religious views, by one or a greater number of gods. The AIs thus place themselves on par with humanity and even surpass them, reaching to the realm of the super-human, the divine. Despite being originally created by a human effort, like the creature created by Dr

Frankenstein in Mary Shelley's novel, they have transcended their origins and seek an even higher state of existence. This is to be reached by uniting the two AIs into a single being, at which Case's human skills are needed. The computers in which the two AIs originate are situated in named geographical places: Berne and Rio de Janeiro. For much of the novel, the AIs are named and defined according to their points of origin: 'the Berne AI' and 'the Rio AI'. In another notable twist of irony, the entities originally defined by their spatial context expand out into the apparent spacelessness of cyberspace and, in the end, become one with it. 'Your mistake, and it's quite a logical one, is in confusing the Wintermute mainframe, Berne, with the Wintermute *entity*', Wintermute explains to Case on their first meeting (p. 142). Unlike Case, whose identity is defined by space, both by the freedom to access cyberspace and by his origins in the North American Sprawl, the identity of the AIs is based on separation from space. In their quest to leave the human dimension fully behind, they seek to abandon the connection to the human space.

In their transcendence, the AIs perform the transition that Case and the other console cowboys strive for: in the terms coined by G. Deleuze and F. Guattari (1987), the AIs move from the striated space of the real world, a partitioned field that prohibits free movement, to the smooth space of cyberspace where affect, distance and freedom of existence and movement dominate. Because the purpose of the novel is to explore the possibilities and implications of a new technological space, the focal point of view remains allogenous: that of Case, who is comfortable in cyberspace, but who will forever remain foreign in comparison with the fully native AIs, as demonstrated by his choice of the physical world towards the end of the novel. Case acts as the bridge between the human world and the world of the virtual. The AIs' points of view are filtered through that of Case, but extensive dialogues with the AIs allow the reader to get a glimpse on their perspective. Unlike artificial beings in many other works before and after *Neuromancer*, the ultimate intention of the AIs is not to control or enslave humanity, but to reach full independence of them. The fear of the non-human and its potential for control is acknowledged throughout the novel, as Wintermute manipulates humans to do its bidding and as Neuromancer attempts to keep Case in its cyberspace domain. The failure of Case's ostensible expertise to control the AIs and their new kind of cyberspace signifies the change from a predictable and

apparently controllable space of simple geometric structures to a non-predictable and potentially dangerous space of para-realistic simulation.

The AIs are the top predators of the virtual ecosystem of artificial landscape and entities, constructing their own humans as humans originally constructed them. Case's ostensible employer Armitage is mentally and physically reconstructed by Wintermute from the war-damaged body and psyche of Colonel Corto, while Molly's previous career as a sex worker called a 'meat puppet', who provides a full body contact in simulated sexual fantasies while unconscious, is likewise orchestrated by the AI. Even Case, in his restoration of organs and nerve connections required to access cyberspace, is both metaphorically and literally put back together by Wintermute. As the AIs can be observed to appear as the latest manifestations of a string of artificial beings invented in culture and literature since the earliest history, in *Neuromancer* the humans, too, appear as golems of the AIs. The dependence of the two categories of entities, human and virtual, goes both ways. Although the domains of the human and virtual initially appear to be wholly separate from each other, closer examination shows that they are interlinked at numerous places. Wintermute assuming the likenesses of Case's associates to speak to him, the creation of the virtual ghost of Linda Lee by Neuromancer, and the existence of the digital construct of the personality of McCoy Pauley all further reflect the crossover between the 'natural' human domain and the artificial realm of the virtual.

The constructed humans and AIs, the representatives of the virtual, shift the literary space away from the familiar landscape of known antecedents and intertextual relations towards a landscape of the uncanny. The term was coined by Ernst Jentsch (1906) and developed by Sigmund Freud (1919) as referring to something that is familiar and foreign at once, and which results in a feeling of unease, due to cognitive dissonance. In an interesting resemblance to the concept of the simultaneous attractiveness and perceived menace of an image, the uncanny fascinates and repulses at the same time. Jentsch and Freud both took their example from E.T.A. Hoffman's 1817 story 'The Sandman' ('*Der Sandmann'*), in which the odd mechanical movement, peculiar interaction and unsettling perfection of looks and rhythm reveal a woman to be a human-like automaton.

As noted, constructions such as awakened statues, homunculi, golems, zombies, clockwork, robots, and, more recently, androids, have existed in stories from the ancient times. In 1970, Masahiro Mori coined the term 'uncanny valley' to describe how human affinity to a robot increases alongside the robot's likeness to a human, up until a certain point, at which the robot's resemblance to a human becomes so great that the human affinity sharply falls down. Shortly before *Neuromancer*, Philip K. Dick imagined constructs near-indistinguishable from humans known as 'replicants' in his *Do Androids Dream of Electric Sheep?* (1968) and in the subsequent film adaptation titled *Blade Runner* (1982). The film *Tron* envisioned computer programs as anthropomorphic entities within the miniature world of a computer. Readers of *Neuromancer* could be reasonably expected to be familiar with the concept of a human-like construct, but they could also be expected to associate them with fear or, at least, unsettledness due to their sheer strangeness. Thus primed to approach the text, the unsettledness of the readers is taken even further as they encounter an entire landscape that is both familiar and foreign, understandable and inconceivable at the same time, inhabited by entities who appear dealable with but who are beyond human comprehension. The non-abstract virtual landscapes constructed by the AIs appear as relatable to by humans, but, ultimately, as simulated human space, their inherent strangeness leads to them becoming uncanny.

The novel's encounter between the human and the virtual/artificial, both in terms of entities and spaces, is directly translatable to concepts within ekphrasis and the relationship between the viewer and the image. The cognitive dissonance between that which is expected and that which is encountered varies from slight puzzlement to outright fear and panic. A representation is an artificial construct mimicking that which it represents. Using the interpretation derived from the concept of the uncanny, we can suggest that the unease present in the Western culture concerning the image derives from the image's simultaneous familiarity and strangeness. An image represents its signifier, but it is not the signifier, it exists outside the existence of the signifier. Although a portrait looks like the person it portrays, it does not move or converse, nor can it be in physical contact with the viewer. A depiction of a scene gives an impression of the event or landscape, but it cannot be heard, smelled or perceived in terms of passing time. Ekphrastic texts, by trying to share the

visual, on the one hand, to rationalize it, but, on the other hand, to revel in the affect aroused by it, thus become a way of coping with the uncanniness of the image.

4.4 The second and third transformation: Case's awareness and choice

As the AIs take an active hand in the human affairs, they introduce a new kind of cyberspace: instead of incorporeality and abstract shapes, this version of cyberspace represents bodies, real people, real locations, with a full multisensory input. Case becomes the first living human being to encounter this new kind of virtual, and to return to life from the fatally dangerous experience. The representational virtual is artificial, but it is created by the AIs, not by humans. Because, ultimately, original creativity is represented as a human quality, the apparent creativity of the AIs, who/which are themselves creations of humans, is dependent on human memories. The process of creation described by the AIs to Case is rooted on his memories. Wintermute assumes the likenesses of people Case has known in the past and shapes the virtual environments based on his experiences in Chiba. Later on, Neuromancer, Wintermute's twin, brings Case to a virtual beach created from the memories of the late Marie-France Tessier-Ashpool, Neuromancer's creator.

The human spaces and the human forms have little meaning to the AIs themselves, as fundamentally incorporeal entities created for the abstract cyberspace. The human spaces are intended for communication with Case. Their origination in humans and delivery through human motifs for the sake of human communication is a concrete process of ekphrasis in terms of the Kriegerian concept of the natural sign, Mitchellian ekphrastic fear and the rhetorical process as described by Webb. In the multisensory environment, in which physical sensory input is as realistic as in the mundane world, the virtual nature of the space remains indistinguishable from the real. The spaces of the virtual Chiba and the beach represent those places, but they are not those places. Yet, their believability brings the representative sign and the signifier extremely close to each other. Because the virtual spaces are dependent on human memories and experiences for their appearance, they function in a dynamic relationship with Case, the experiencer. A struggle arises because Case is overwhelmed with the uncanniness of the representative virtual. He reacts in confusion, anger, fear and strive to understand what is happening. At the same time, the

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virtual spaces function in a sense that is familiar from Classical ekphrasis. A message is desired to be delivered in a manner that makes an impact. To make this impression properly, the deliverer of the message relies on the recipient's personal background and memory to create a narrative individually interpreted. Although Case feels disconnected and at the mercy of the narrative presented by the AIs, in fact, that narrative requires him, the 'reader', to make that narrative happen at all.

The passages set in the representational virtual space have more significance to the overall narrative than the brief passage of Case's return to cyberspace discussed above. They isolate the theme of the conflict between the real and the virtual, and they evoke key events in the protagonist's personal journey by transforming him further towards his eventual understanding. Instead of stilling the narrative, the ekphrases of the representational virtual function as important turning points of the narrative, providing exposition of the past events and motivation for the future events. As with the first ekphrasis, the subsequent ones discussed here focus on Case's emotional responses to his visual experiences, thereby underlining the significance of the virtual visuals evoked.

The first ekphrasis discussed incorporated a strong motif of sex. In the passages discussed in this section, the dominant motif is death: another ultimate bodily experience, another transition. The experience of the new kind of cyberspace requires a new kind of understanding and the cost of that understanding is death. Like the dying and rising young gods discussed by James Frazer in *The Golden Bough*, the console cowboys, who seek understanding of the AIs and their worlds, must undergo a temporary death before they return to life with increased knowledge and experience. In life, Dixie McCoy acquired a legendary status among fellow hackers by surviving braindeath while working, which resulted in his nicknames 'Flatline' and 'Lazarus of cyberspace'. On discovering that the event in question was triggered by Dixie's attempt to penetrate the security of the Rio AI, Case is inspired to follow in his mentor's footsteps and to try to hack the AI in Berne. The attempt leads to his own temporary braindeath, but during that period he experiences the representational cyberspace for the first time along with his first 'face-to-face' meeting with Wintermute.

Like tribal shamans, Case metaphorically visits the technological Underworld and returns with new skills and understanding of cyberspace. Another mythological allusion can be found in the Sumerian goddess Inanna who descends into the Underworld and returns with the basic skills of civilization for the people. Case dies twice more in the course of the narrative, both times after extensive conversations with an AI in the representational cyberspace. By doing so, he matches and surpasses the legendary status of his teacher, Dixie. As a dying and rising hero, who is prepared for sacrifices in order to achieve knowledge and to reach his ultimate goal, Case moves from his initial literary space of *noir* into a grander literary space of multi-layered mythology.

When Case comes into contact with the new form of cyberspace for the first time, the encounter is represented in a literal transition from one space to the next, as a dark sphere separates from the AI, manifesting as a white cube, and falls to encompass him. The following passage is conceptually divided into two parts: the first one is more directly ekphrastic, evoking Case's initial experience of the representational cyberspace, mostly described from the third-person perspective. The second part is dedicated to dialogue between Case and Wintermute, mostly delivered in direct speech. Accordingly, for the present purpose, the first part of this passage is better suited for ekphrastic analysis.

In technical terms, the passage (pp. 140-143) employs two abrupt breaks, five ellipses and several occurrences of short single-line sentences clustered one after another. They create a deliberately disjointed effect, as the disorientation desired of the reader is taken to a new level. Physically unconscious, Case hallucinates input through all his senses, experiencing the scent of cold steel, sensation of cold and pain, a visual eruption of faces, and a meaningless question asked by an unidentified voice, repeating an encounter in the real world. The intimate senses of smell and taste, absent from the 'normal' cyberspace, are found in the process of entering the new one. Multisensoriness is a crucial element in the representational cyberspace. Case feels the virtual rain on his skin, experiences physical pain, and hears the noise from the games arcade. The simulated experience is so realistic that, as in dreams, Case forgets the most recent events in the mundane world and believes himself to be back in Chiba. The Baudrillardian fear of the virtual superseding the real has temporarily fulfilled itself to Case.

Contrary to the eight steps of immersion set out by Ryan, Case's experience is not voluntary nor undertaken for pleasure. The immersive experience is overwhelming in its violent unfamiliarity. In his deep, dreamlike, involuntary immersion, Case's immediate concern is for the lack of money in his pockets and the location of his jacket. Through the pointedly mundane daily concerns, Case, who defines himself by the space he occupies, attempts to situate himself in time and place: 'Friday, it had to be a Friday. Linda was probably in the arcade.' The textual transitions into silence and the frequent punctuation use their pauses of varying lengths to form an impression of slow action, as though a moving image with a very slow and jerky frame rate:

> His back hurt, his spine.
> He got to his feet, brushed wet hair out of his eyes.
> Something had happened…

Together with the confusion and the slowness, a vocabulary of pain and discomfort vividly evokes a situation comparable to a birth, near-death experience, or, indeed, a resurrection into something new and unexpected: 'Coughing, wringing rain from the front of his shirt, he edged through the crowd to the arcade's entrance.' Case is symbolically moving through a set of obstacles towards a place of another transition. To Case, the games arcade is a significant personal space, as it was there that he met Linda Lee. Molly and her body marked the restoration of Case's physical ability to return to cyberspace, but, as seen in this passage and in the one discussed below, Linda symbolizes a greater understanding about cyberspace and the human relationship with it.

In contrast to the greyscale and the lurid neons of the normal cyberspace, the simulated Chiba presents a broader spectrum of colour, with graffiti in 'faded pinks and yellows' and 'a faint flow' of fluorescent lights. The colours are more natural and gentler than those featuring in the descriptions of the real version of the arcade. The simulation stands apart from the 'normal' cyberspace, but also from the real world; it has become a third space. The multisensoriness of the space does not only extent to the usual physical senses, as Case is able to pick up 'bored tension' in the arcade.

The key point of the passage occurs when Case finds a virtual 'ghost' of the late Linda playing a game. A physical connection, a kiss and the grasping of a hand, occurs between them. The physical connection, which should be impossible in the virtual world, as per the dogmas of the console cowboys, jolts Case into a full intimate contact with the simulation. The borders of the real and the virtual have, if not yet broken, strongly bent out of place. Case closes the distance to the image not only in a physical, but also in an emotional interactive connection. The strong positive emotion caused by physical input within cyberspace makes the realm of the body intrude the realm of the virtual. Another set of short, interrupted sentences marks another transition, this time, from a space of illusion to a space of memory, as the arcade disappears and Case realizes where he really is:

> He smiled.
> Something cracked.
> Something shifted at the core of things. The arcade froze, vibrated –
> She was gone. The weight of memory came down, an entire body of knowledge driven into his head like a microsoft into a socket. Gone. He smelled burning meat.

The motif of meat/flesh/body assumes an ironic function. That which the console cowboys hold in contempt, as useless in cyberspace, now signifies the point of realization. Following the emotionally charged physical interaction with the simulation, Case's memory is described in strongly physical terms: the 'weight of memory', a 'body of knowledge driven into his head'. The smell of burning meat acts elsewhere as an allusion to Dixie's story about his own temporary death: 'My joeboy smelled the skin frying and pulled the trodes off me' (p. 139). As the text frequently favours repetitive phrases and motifs to signify a connection between the real world and cyberspace, to demonstrate how the latter is a reflection of the former, the reader will realize that at this point, Case himself is undergoing a death experience. Here, the meat also burns figuratively, as the physical, affective interaction with the non-physical creates what should be an impossible paradox. Case has achieved enough understanding of the technology in question to realize that a technological immersion is just a simulation.

The emotional charge, to which Wintermute refers in their first conversation as causing a shift in the virtual environment, also releases Case's mind to further emotions. From a series of confused questions, negations and expressions of uncertainty in the dialogue with

the simulated Linda, the text shifts to expressions of aggression: 'Case turned slowly, his shoulders hunched, teeth bared, his hands bunched into involuntary fists.' As the transformation was triggered by the positive emotion caused by the physicality of the touch between himself and Linda, now the signs of negative emotion are also represented in physical terms. The simulated arcade has changed from noisy and crowded to empty and silent. The simulated space is an inverse mirror to Case's mental space. Up until this point, the crowded simulation has mirrored his empty, confused mind. When his memory and strong emotions return, the simulated environment creates space for them by emptying itself. Another set of short sentences on separate lines call the reader to pay attention and to experience the silence alongside Case:

> Echoes moved through the hollow of the arcade, fading down corridors of consoles.
> He stepped out into the street. The rain had stopped.
> Ninsei was deserted.
> Holograms flickered, neon danced.

The multisensory element of the rain has ended. Most of the sensory input has, again, been restricted to the visual and to the auditory, in an attempt to back down from the explosive meeting of the body and the virtual, as present in the encounter between Linda and Case. The assonance and alliteration of the broken internal rhymes of 'moved – through', 'hollow – down – out', 'corridors of consoles', 'stepped – stopped', 'arcade – fading – rain' near-onomatopoeically mimic the echoes through the empty space. The sharp consonants of 'deserted – flickered – danced' create a verbal image of flickering neon holograms. They may even remind the reader of the hissing sound of crackling electricity and the 1980s style neon signs. Once more, the prose text of the novel uses techniques familiar from poetry.

The direct voice of Case employs another technique adopted from the realms of poetry and rhetorics: 'I had a cigarette […] I had a cigarette and a girl and a place to sleep. Do you hear me, you son of a bitch? You hear me?', he rages to the empty arcade, addressing the immanent AI. After a few moments of listening, implied by the above passage of echoes and dancing holograms, he spots a pack of cigarettes with the name of a tobacconist. Correctly interpreting the occurrence as a message to go to the office in question, Case expresses his understanding in a chiastic construction of parallel and reversal: '"Okay," he

said, picking up the matches and opening the pack of cigarettes. "I hear you."' A chiasmus is used to emphasize a particular point. Here, the reversal of 'You hear me?' into 'I hear you' summarizes and emphasizes Case's understanding, and, to some extent, his preparedness to deal with the new situation and the uncanny space. He has shifted from meek confusion to realization, first through affection, and then through aggression. As a console cowboy, he has been accustomed to having control over cyberspace. Now, his total loss of control brings forth first an aggression, as he demands the AI to listen to him, and, secondly, a degree of humility, as, in the empty space of understanding, he agrees to listen to the AI. At the end of his subsequent conversation with Wintermute, Case rejects the understanding offered by attempting to regain control by violence, but due to the virtual nature of the environment and his opponent, the attempt is fruitless.

In this passage, ekphrasis once more represents a transition from one space to another. From the 'normal' cyberspace, over which Case has control, he is involuntarily moved to another, more highly developed version of cyberspace which, by its multisensory and personally significant elements, threatens the division between the real and the virtual. The ekphrasis evokes Case's psychological and physical responses to the new space and transfers them to the reader to create unease at the prospect. The early climax in the passage, meeting with the dead Linda, emphasizes the significance of the human experience through the body, already hinted at in the first ekphrastic passage. The body is the source of pleasure, but it is also subject to death, which defines humanity in a manner that cannot define the artificial constructs such as the AIs. Linda has already died; in this passage, Case himself is, in practical terms, also dead. When Case attempts to resolve the situation by violence, it is doomed to failure, as death cannot take place in cyberspace, although the shooting does temporarily relinquish the AI's hold, enabling Case to return to the real world. Equipped with new experience and understanding acquired in the metaphorical Underworld of Cyberspace, Case is now better able to deal with the constructs and with the new uncanny space.

Another turning point in the narrative takes place towards the end of the novel. The relevant passage (pp. 276 – 290) encompasses two chapters. Due to the length of the passage, this analysis opts to divide it into three shorter sections. The first section (pp. 276 – 279), in

which Case moves along a simulated beach, resembles Case's first encounter with the representational cyberspace in expression and techniques. It seeks to evoke yet another level of new space and resulting disorientation, as the AI-created cyberspace now appears wholly non-urban, a simulation of a natural environment. This analysis will be focusing on the first section. In the second section (pp. 279 – 285) Case stays in one virtual place with another virtual ghost of Linda Lee. Most of this section is covered by direct speech in the form of a monologue and dialogues, as Case tries to understand the nature of the current virtual space and Linda's role within it. The third section (pp. 286 – 290) is, likewise, mostly taken over by dialogue, but in it, Case begins moving again and meets the second AI, Neuromancer. The movement leads to the necessity of more vivid, evocative description, as the space around Case changes. The notion of ekphrasis always stilling the narrative is, again, discredited. Vivid description appears when a situation changes, typically, as one space changes into another through movement. When the situation and the space remain unchanged, description is used in a plainer manner alongside a great deal of direct speech. Contrary to the Spitzerian way of ekphrastic thinking, ekphrasis, here associated with movement rather than stillness, develops the narrative. A stillness in the narrative, instead, takes place during dialogic situations, which examine and reflect on the current narrative context.

The first section begins, once more, with Case's involuntary transition to a new space. The virtual narrative is framed by the technological, intent action: 'He jacked in'. As before, short sentences, fragments and an ellipsis mark the spatial and mental disorientation, here enhanced further by the repetitive negation, followed by a longer sentence with a series of repetitive –ing sounds of 'scurrying – fleeting – something – rushing'. The verbs convey sudden movement and speed, while 'something' indicates indefined confusion:

> Nothing. Gray void.
> No matrid, no grid. No cyberspace.
> The deck was gone. His fingers were…
> And on the far rim of consciousness, a scurrying, a fleeting impression of something rushing toward him, across leagues of black mirror.

An abrupt break in the text shifts Case's consciousness elsewhere. The ekphrasis continues by evoking a beach, beyond which rises a mirage-like impression of a city. 'There seemed

to be a city, beyond a curve of beach, but it was far away.' The image of the city functions as Case's motivation throughout the passage, as he tries to find his way there. At no point is it presented as a definite location rather than Case's fantasy: 'There seemed to be a city', 'The city, if it was a city', 'At one point he decided that it wasn't a city at all, but some single building, perhaps a ruin; he had no way of judging its distance'. It is notable that the city motif, as it persists through the passage, is described in visual and distance-related terms. These qualities can be associated to what Case considers the 'normal' cyberspace, in which the sensory input is based primarily on the visual sense, as well as on the sense of movement across distances. The exclusive visuality of the city and Case's desire to reach it reflect Blanchot's notion of a fascination with the image, roused by the ultimately unreachable distance between the image and the viewer. In the passage discussed above, Case briefly closed the distance between himself and the image by interacting with Linda. The visual sense is linked to artificiality, and to the control that Case is currently lacking and trying to restore. The image of the city symbolizes his own familiar world, from which he has been separated, along with the dominance of the visual sense and the control that it has given him.

This space, natural and simulated at once, forces Case to experience the space through all his other senses and results in uncontrolled emotions. Case has entered the image, and found it, paradoxically, to require perception through all the other senses, in order to be fully actualized. As during his previous visit with an AI, Case's emotions are depicted in physical terms, as bodily responses to the space around him. This contrasts sharply with the 'normal' cyberspace, which does not manifest in bodily terms. The text comes to query the 'real' status of the shapeless cyberspace, which does not allow for full human expression. Unlike during Case's previous visits to cyberspace, the current ekphrasis employs longer sentences, with punctuation allowing several clauses related to each other in simple, yet flowing expressions. With its inner structures, the text represents the difference of a natural environment when compared to artificial, urban ones. This time, Case retains awareness that he is in a simulation, but in terms of the totality and the transparity of the environment, the immersion is even deeper. The beach passage brings out a metaleptic mini-narrative emerging from the frame story, although the two remain firmly connected. The mini-narrative, contained within the virtual environment, places Case in the role of a castaway,

who, during his quest to reach home, the distant city, is presented with a great temptation by a divine being in order to give up his quest. In order to reach his goal, Case must, effectively, act out his role.

In contrast to the dominance of the visual in the concept of the distant city, the immediate beach is experienced by Case through all his other senses. The repeated broken rhymes of 'damp' and 'sand' are followed by references to Case's body shaking from fear and from cold: 'He crouched on his haunches on the damp sand, his arms wrapped tight across his knees, and shook.' The audible oddity of a gull's cry increases his discomfort. The mention of a gull is the only reference to an animal in the text, which, on the one hand, emphasizes the naturality of the space, but, on the other hand, also increases its uncanniness from Case's perspective. From his exile in the realm of the body, in Chiba, he has now been exiled in the opposite direction, in the full realm of the virtual. He reacts with despair, fear and revulsion. The alien space of the beach and his physical experience of it render Case himself to a primal, infant-like condition:

> A wind was rising. Sand stung his cheek. He put his face against his knees and wept, the sound of his sobbing as distant and alien as the cry of the searching gull. Hot urine soaked his jeans, dribbled on the sand, and quickly cooled in the wind off the water. When tears were gone, his throat ached.

The two short, simple sentences mark the sudden physical effects of the wind and the flying sand, before the consonances 'sound – sobbing – soaked – sand' and 'wind – water' create a verbal representation of the flow of fluids. The simile of Case's weeping likened to the gull's cry functions as an emphasis of his loneliness in a strange space. Tears, urine and the water of the sea are mixed in a metaphorical amnionic fluid, in which Case must be reborn. From holding the bodily 'meat' in contempt, Case has now, ironically, in the very environment that is supposed to celebrate bodilessness, become pure meat, unable to control his bodily functions. In the previous excerpt, Case reacted with aggression to his initial loss of control over cyberspace and to the impending intertwining of the realms of the body and the virtual. Here, his loss of control over the nature and functions of cyberspace is complete, symbolized by his loss of control of his body.

Yet another mental transition follows the quasi-physical one. Previously, in the simulated Chiba, Wintermute explained to Case that the shape of the virtual environment had its origins in Case's own memories. At that point, the virtual was still ostensibly bound to the human control and to the human experience. Here, the virtual space is completely separated from Case's own experience. He can no longer claim any kind of control over the virtual, which is why aggression, so prevalent the previous time, has now yielded to weakness. A sense of dark humour is added to the scene, as occurrences of bodily fluids and invocations of divine or quasi-divine figures follow each other. The burst of urine and tears is followed by Case's mumbled plea for help, or accusation, as two repetitions of Wintermute's name. Immediately afterward, Case finds himself unable to wipe his running nose, which is followed by his expression of frustration or fear, as two repetitions of the name of Jesus. Wintermute and the Christ are ironically juxtaposed as divine helpers, or figures to swear by, but it is Case himself who must undergo a resurrection: 'You needed this world built for you, this beach, this place. To die' (p. 278). Case follows a light in the darkening beach in a subtle recreation of the alleged near-death experiences. Case is passing through another metaphorical Underworld, in which his submission results to his rediscovering his own humanity as his strength and being able to return to the real world, again, with increased understanding.

In the second section (pp. 279 – 285) of the beach passage, Case deals with the virtual ghost of Linda. In the beginning, a long monologue by Case, aimed at the AI in control of the space, functions as an exposition to the reader. Rather than outright explained to the reader via a third-person view, and risking any straying away from the vivid creation of indirect immersion, the summary of the events is presented 'in-character' via Case as a challenge to the AI: 'Hear that, buddy? I know what you're doing. I'm flatlined. This has all taken about twenty seconds, right?' The technique of reviewing and explaining past events of the plot, while preserving immersion, is continued through the rest of the second section via a dialogue between Case and Linda.

The second section ends with the crux of the entire long passage: an evocative reflection of Case making peace with the concept of the body, as he makes love to Linda. Despite her

status as an ambiguous virtual construction, Case finds a humanity in her that goes beyond even the input of the simulated intimate senses of touch and taste:

> There was a strength that ran in her, something he'd known in Night City and held there, been held by it, held for a while away from time and death, from the relentless Street that hunted them all. It was a place he'd known before […]. Something he'd found and lost so many times. It belonged, he knew – he remembered – as she pulled him down, to the meat, the flesh the cowboys mocked. It was a vast thing, beyond knowing, a sea of information coded in spiral and pheromone, infinite intricacy that only the body, in its strong blind way, could ever read.

Rather than seeking to represent the environment, these lines represent the blossoming of Case's new understanding of the importance of the human in comparison with the virtual. The physical language of the lines – 'strength', 'ran', the repeated use of 'held', 'hunted', 'pulled', 'meat' and 'flesh' – mimics Case's newfound appreciation of the body. Linda's 'strength' is something that eludes description, but it is the essence that separates humanity from the realm of the virtual. The body is compared to cyberspace, by implication of coding and intricacy, but whereas cyberspace has been presented in abstract and urban terms, the body is presented as 'a sea of information', a metaphorical body of water, another element. The virtual marine environment, in which Case has found himself, previously so alien, now, ironically, comes together with the human body to represent all that is natural, primal and unconstructed. Although, in comparison with cyberspace, the body may be 'blind', it is still able to perceive matters that cannot be reached within the virtual.

Heffernan describes the relationship between the word and image and between the viewer and the image as one of a gendered struggle for control. The visual contains a power of fascination, with the potential of holding the viewer captive. After Case first meets Linda on the beach, he keeps his distance from her, psychologically and 'physically', despite her wishes. While the distance causes the viewer's usually unsatisfiable desire for the visual, according to the Western tradition of the image, it also acts as a safety mechanism. As discussed in Chapter 2, in context of immersion, the perceived danger of immersion lies in the closing of the critical distance, in the possible intimate contact with the image. When Case has sex with the virtual Linda, he abandons all critical distance and, briefly, melds with the image. However, equipped with previous experience and knowledge of the virtual,

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this time, the union provides him with a further resolve and clarity of mind. In direct contrast to the scholars who maintain that accepting immersion is to abandon all critical ability, *Neuromancer* suggests that an intimacy with the artificial image, an immersion in it, produces a far greater critical ability. In Heffernan's terms, Case, the active male viewer/user takes control of the passive manifestation of the image. Despite her desire, the virtual Linda does not initiate action, but is subject to the wishes and actions of Case. Having approached her on his own terms and thus taken control, Case is able to pull free from the captivity of the image and to make his way out of the simulation. The relationship of Case and the virtual Linda demonstrates that despite *Neuromancer*'s status as a seminal, innovative work in terms of the representation of the digital in text, it is still subject to many of the traditional prejudices concerning the image. Nonetheless, the text differs from the Lessingean dualistic table qualities by equating the body, and the bodily contact, with understanding and rational thinking.

In the third section (pp. 286 – 290), Case acts based on his new understanding. Despite having reconnected with the human element through Linda, he chooses to leave her behind in the virtual world due to her own virtual nature. As his own personal immersive illusion has been broken in the sexual encounter with the virtual Linda, forces from the physical world are able to penetrate the virtual world. His companions in the real world lead him back to reality by pumping music into his physical ears. The breaking down of the illusion is represented by Case perceiving clearly artificial visuals superimposed on the simulated reality: translucent symbols on the walls of their shelter and a trail of afterimages left by the movement of his hand. The music becomes a synaesthetic experience, with the melody manifesting as code, and revealing the digital structures of the virtual world. The artificial symbols are compared to a line of waves sweeping across Case's vision, creating another association to the naturality and the metaphoric value of understanding associated with the motif of the sea. While the visual marks the borders between the virtual and the real, it is the auditory sense that guides Case back to the real world. He is 'resurrected', by means of the music.

Case discovers that this environment has been set up by the AI Neuromancer, with an intention to keep him there, together with the virtual ghost of Linda: 'Stay. If your woman

is a ghost, she doesn't know it. Neither will you.' Linda occupies an ambiguous place in the virtual environment: in the real world, she is dead, but in the virtual world, she lives. The reader assumes, based on Dixie McCoy, that she, too, is a digital construct, but Neuromancer speaks of itself as one who calls up the dead: 'I *am* the dead, and their land'. As they speak, Case's physical body lies dead once more. The AI is offering him a technological afterlife, an apparently serene existence with Linda, with the two of them as the Adam and Eve of the new simulated world. The AI, as the serpent in the technological Eden, offers a reversal of the Fall, which Case has already undergone in the beginning of the novel. Instead of tempting the mythological first couple with knowledge, it proposes the abandoning of knowledge.

According to the step eight in the immersive process, as discussed by Ryan, the purpose of immersion is aesthetic and pleasurable, with no tangible effects on the real world. In this case, the AI's offer holds the potential of great pleasure, but the extreme consequences of Case's choice in the virtual would reach out to the real world as well. Here, immersion is presented as profound and dangerous: if the user gives up awareness of the virtual, immersion represents a possible step into a new kind of existence, death and the unknown beyond death. Case, alerted to the value of humanity and the real world, chooses the real. Like a reversed Orpheus who wishes to leave his Eurydice behind, he walks away from the virtual underworld. Significantly, although the virtual environment is convincingly multisensory, the temptation is presented through the visual. The danger of the fascinating visual is emphasized. Case is able to leave by closing his eyes as a defensive gesture, and by focusing on the auditory input of the music from the real world. The transition of Case's return is marked by another, brief, independent ekphrastic paragraph, in which an experience of a liminal space between the virtual and the real is invoked in terms similar to his arrival on the simulated beach: nothingness speeding up into a fast series of images, voices and impressions.

In these passages, ekphrasis marks significant transitions from one space to another. It evokes the new environment by means of generating affect through associations, metaphor and specific use of language. It develops the overall narrative by creating the starting point and the rationale for the metaleptic mini-narrative within the beach simulation, within

which Case must conquer his own prejudices and the temptations presented by the AI. The mini-narrative is, effectively, framed by the ekphrasis. The passage takes up in full the theme of the importance of the body and the human. It demonstrates to Case, and to the reader, that separation from the body, the physical, is ultimately as painful as separation from the virtual has been to him in the past.

4.5 Ekphrasis in *Neuromancer*: transformation

In *Neuromancer*, ekphrasis acts as a focusing device. It concentrates the reader's attention to the passages that evoke significant transformations from the protagonist's part. As the entire text represents the concept of a new kind of space, unfamiliar to its contemporary readers, the ekphrastic passages invite the implied readers to explore that space and their own responses to it. Case is presented as an addict, someone who has devoted his whole identity to cyberspace and who has rejected the physical world. Cyberspace is represented as a *tabula rasa* of sorts – a domain of great, abstract potential, the creative power of which can be used for many different directions. The addiction to the matrix has resulted in passivity and despair, to the loss of control. The artificial, the visual, has been allowed to rule over the human. Ironically, it takes the artificial creativity of the artificial entities for the human to rise up to the challenge and retake control over the artificial.

Although the novel's conception of cyberspace was groundbreaking in its own time, the uninnovativeness of the characters and plot are matched with the very traditional treatment of the human relationship with image – that which is representational but artificial. The representational is depicted as attractive but as dangerous at the same time, embodied in the female characters of Molly, the gatekeeper, and Linda, the virtual temptation. The sexist associations are most likely due to the long intellectual tradition of linking the visual and the appealing artificial with the female rather than for any deliberate intentions on Gibson's part. Similar stereotypes are visible across the text, particularly in Case himself, although due to the same intellectual and literary tradition he ends up in the ultimate active role as the saviour, who defeats his own internal struggles to emerge a victor.

The virtual in *Neuromancer* is a realm of modern mythology which encompasses old stories and suggests new ones, although many in the old guises. The considerable intertextuality in the novel assists the reader in making sense of the envisioned future. The future suggested by the work lies less in the megacorporations or in the post-political climate and much more in the notion that computer technology would encircle the world and be a constant presence in everyday lives. The novel warns against the overuse of such technology, proposing that a full uncritical embrace of the virtual would lead to a rejection of humanity and the physical world. Even as Case finally walks away from the realm of the AIs, the ambiguous ending acts as a reminder that the virtual, the artificial, the modern manifestation of the image, remains a potent, appealing and potentially dangerous force.

5. The humanized virtual in Neal Stephenson's *Snow Crash* (1992)

While *Neuromancer* had coined the concept of virtual space, the radicality of the vision presented by Neal Stephenson's *Snow Crash* in 1992 focused on the concept of virtual space becoming commonplace. No longer represented as alien, mysterious and frightening – and, crucially, as the domain of only the select few – the notion of a virtual world is depicted as a social space, available for purposes of leisure and business alike. It is accessible to everyone by means of a personal or a public computer. Users log in to meet friends, date, go to nightclubs and concerts, participate in games and explore. Such interactions require an environment to which its human users can easily relate. Consequently, the entire virtual space is humanized. Users assume representational graphical avatars that move in three dimensions around the virtual space which is called the Metaverse. The space itself is shaped to meet with human expectations and needs. This new humanized virtual space features private 'residential' areas, public spaces and even public transport. In contrast to the fear and unsettledness that representational simulated space spurs in *Neuromancer*, Stephenson's novel suggests that realistic simulation inspires playfulness and creativity.

The human aspect of virtual space, with the focus on leisure activities, is demonstrative of the changing function of the digital in the turn of the 1980s and 1990s. The presentation of virtual not as a threat, but as part of everyday lives, allowed *Snow Crash* to tap into this rising enthusiasm. Inevitably, the novel became known as the *Neuromancer* of the 1990s (Fisher 1994). The designation illustrates not only the popularity of the text, but also its seminal position in the representations of virtual space. As will be discussed below, the link drawn between the two novels is not coincidental, due to *Neuromancer*'s considerable influence on Stephenson.

The humanization of virtual space is clearly visible in the characters and plot of the novel. Many of their features are familiar from *Neuromancer*, beginning with the young male protagonist with considerable talents in programming, but who is living in the fringes of society. However, unlike Case, whose fall was a punishment for his treachery, the ironically named Hiro Protagonist inhabits a self-sacrificial, 'heroic' space. As a result of

selling his corporate stock to finance his mother's comfortable retirement abroad, he now lives in a large storage container and balances between unemployment and menial jobs. His mother's health and happiness is 'his personal fortune' (p. 58). In contrast to Case's misanthropy and general dislike of the 'meatspace', Hiro is established early on as a young man to whom family and friends are important. He strikes an early connection with the teenage skateboard 'Kourier' called Y.T., visits his friend and former employer Da5id in the Metaverse and dreams of getting back together with his former girlfriend and Da5id's former wife, Juanita. He works at rock concerts and enjoys playing virtual games. In line with the casual nature of the Metaverse, Hiro is represented as living a relatively ordinary, generally optimistic life, as opposed to the misery experienced by Case. The setting in which Hiro and his friends live focuses on the fragmented United States. In an apparent commentary on government control and the contrasting energy of private enterprise, the novel presents a weak, excessively bureaucratic Federal government barely holding together semi-autonomous 'burbclaves' formed around commercial or ethnic interests. The projected timeline of the setting is unclear: the United States has changed, technology is more advanced, but Hiro's father is said to have fought in the Second World War. From the perspective of 1992, the novel perhaps presents an alternative present rather than a futuristic scenario.

Besides the principal features of the main character and the somewhat dystopian setting, another similarity between *Neuromancer* and *Snow Crash* is the fact that the conflict and its eventual resolution appear as two sides of the same coin. A complex computer program causes a threat or presents an obstacle, which can only be overcome using another program against it. When a computer virus called Snow Crash inflicts brain damage on Da5id in the Metaverse, Hiro is motivated to seek out the origins of the virus. In the process, he is assisted by the two main female characters: Y.T., a comfortable lay user of the Metaverse, whose main interests nonetheless lie in the mundane world, and Juanita, an expert computer programmer famed among the developers of the Metaverse. The narrative moves through several locations in the mundane world, again confirming McCallum's (2000) observation that even so-called postmodern texts in the context of virtual worlds still fundamentally rely upon conventional linear adventure plots in the physical world. The plot concludes in two resolutions: one in the virtual world, as Hiro defeats the intention of a terrorist to infect the

brains of the majority of the world's programmers gathered in one virtual place, and another in the mundane world, as Y.T. escapes from her captors.

The two endings highlight the two-layered nature of the text. Due to its casual nature, virtual space forms an ever-present dimension in the text, until it becomes almost another layer of existence. Early on in the text, passages that take place in the virtual world are sharply separated from the passages that occur in the mundane world, but as the narrative develops, passages become harder to categorize as one or the other. Hiro, in particular, switches rapidly and briefly from the mundane to the virtual and back again. As users in the virtual world are also simultaneously aware of their mundane surroundings, blending of the two occurs naturally. Another distinct feature of the seemingly closer connection between the virtual and the mundane includes long, practically didactic dialogues that take place between Hiro and the research 'daemon' – an AI under human control – known as the Librarian. Such dialogues occur entirely in the virtual space, but the environment is typically not described beyond a quick identification. Yet, despite the easy switching between the virtual and the mundane, at no point do they become one and the same. In practice, the bifocalisation of Hiro and Y.T. marks two connected, but ultimately separate third-person narratives. One, told from Hiro's point of view, takes place largely in the virtual space, and another, told from Y.T.'s perspective, is centred in the mundane space.

The incorporation of virtual and mundane elements throughout the novel means that specifically ekphrastic passages are harder to discern. The clearest example of virtual ekphrasis occurs in the early part of the text, when the public area of the Metaverse, the Street, and the Black Sun Club are extensively introduced to the reader. Later on, another, longer, passage evokes Y.T.'s experience in a virtual villa from the perspective of someone who is at her most comfortable in the mundane world. Elsewhere, the strong awareness of the digital visual is constantly present, but it often fails to employ the strategies necessary for a full ekphrasis as discussed in Chapter 2: evocative language, unnecessary details, poetic devices and other psychological appeals for creating immersion. The instances of plain description function as a reminder that Heffernan's definition of ekphrasis is not comprehensive: not all verbal representations of visual representations possess an ekphrastic element. Indeed, it will be seen that even at its most ekphrastic, Stephenson's

text tends towards a far plainer style than Gibson's and Stross's. Yet, the text of the novel manages to present very strong visuals and it displays awareness of the relationship between image and text. The paradox of powerful visuals and plain textual style is an example of the considerable irony that permeates the text on a number of different levels.

The text plays around with conventions and the reader's expectations. Although the Metaverse is not a game world in the same sense as, for instance, Avalon Four in *Halting State* (Ch. 6) is, the text contains numerous hints of a game-like approach. The narrative tense is the present, which indicates an implied immediacy in the plot, an illusion of events unfolding in real time. The narrative begins as Hiro is delivering pizza, but we do not get his name until later. For the first few pages, he is 'The Deliverator', a whimsical alias that one might adopt in a game. The two layers of existence are named; aside from the Metaverse, we have Reality, at all times capitalized like the name of a designated area in a game. Hiro's defining self-identity as the best swordfighter in the world is the result of his success at the swordfighting game in the Metaverse – the game, for which he himself wrote the parameters. The text attempts no direct interaction with the reader, but the exchange between Hiro and Y.T. concerning his name shows that the reader is expected to very subtly take part as an active recipient of the story.

For the reasons outlined above, this chapter will consider ekphrasis in *Snow Crash* less in terms of close analysis of specific passages in the way of Chapter 4, and more as a fundamental thread that extends throughout the whole text as discussion on the relationship between word and image, and between the viewer/user and the digital image. Firstly, this chapter will discuss the novel as a response to the gradually emerging digital culture in order to situate the text in the cycle of expectations between the author and the original readers. Secondly, a major relevant concept in the text – the metaphor – will be explored from the context of representation. Thirdly, this chapter will focus on the dynamic of the gaze as presented in the novel. Finally, this chapter will consider coding as the means to write a dynamic picture, and what this means in terms of issues of representation.

5.1 *Snow Crash* as a response to the emerging digital culture

In the novel, Stephenson provides a paratext in an afterword, in which he briefly explains some of the concepts featured in the story as well as their origins. This feature creates two interesting points. On the one hand, the conceptual distance between the author's background knowledge and the contemporary implied reader's knowledge, which we might call a 'familiarity horizon', was expected to be so wide that accompanying explanation was deemed worthwhile. On the other hand, the explanation given was placed after the narrative, rather than presented before it to prepare the reader. It is as though the reader is expected to put in considerable mental effort in the process of reading through a narrative which contains a large number of unfamiliar motifs and concepts. At the same time, the story provides the reader with some support through the reading process by offering explanations of the various concepts presented. The issue of explaining concepts to the unfamiliar reader was raised by Stephenson himself in a recent interview (Maughan 2012) in connection with a possible cinema adaptation of *Snow Crash*. He points out that a film adaptation in the early 1990s would have had to bear 'a crushing expository burden' regarding the existence of a global information network and the ability of hundreds of people to log on to it at the same time. Such explanation, he remarks, would have taken up too much space in the finished product, and, in any case, it would have seemed dated and incorrect a few years later.

Today, Stephenson suggests in the interview, the situation is different: 'We don't need to explain what an avatar is […]. And the graphics can be whatever we want them to be. The graphics won't look stupid and old and dated.' His singling out of the graphics as an effective key aspect of a setting that deals with computer-generated environments testifies to the relevance of the digital image in an inquiry into representations of virtual worlds. It is implied that the graphics are the most expressive form of the current state of technology. As such, it follows that they are also implied to be the most obvious symbol of the familiarity horizon, which is demonstrated here to extend from the present to the past as well as towards the future. A virtual world represented by unfamiliar graphics, subjectively perceived as being of high quality, appears as futuristic and impressive. As the level of technology moves on, the graphics that were previously seen as top of the line become

increasingly more familiar, until they appear as dated and clumsy visual reminders of a lower level of technological development. Stephenson, likely aware of the issue already when he was writing *Snow Crash*, could expect his implied reader to approach his text with a similar mindset. A novel with a sufficiently familiar premise, as developed from *Neuromancer,* would appear as groundbreaking if it introduced new directions for that premise. The readers would be attracted by novelty as long as they had a relevant background from which to operate. In the early 1990s, the Metaverse, as presented, was familiar territory in that it was a virtual space, but also unfamiliar territory in that it was a new kind of virtual space.

The Metaverse is fundamentally a human space, constructed by humans such as Hiro, Da5id and Juanita, and intended for human use. While in *Neuromancer* access into the matrix seems still to be possible only for specialists, in *Snow Crash* the monolithic Metaverse is available to anyone who either owns a private computer or has access to a public terminal, although the method of access has ramifications on a certain aesthetic hierarchy within the Metaverse. Unique, expressive avatars are admired, whereas public terminals only allow black and white poor quality representations of their users. Still, in accordance with the time of its publication, the novel states outright that owning a private computer is expensive: Hiro owns one despite not actually being able to afford it, and the vast majority of the world's population is unable to afford one. In contrast with the mundane world of decay, concrete, ruins, lack of opportunities and control-hungry authorities, the Metaverse is a world of colours and individuality, as expressed by the avatars. The main area of the Metaverse is the Street, described as a brilliantly lit boulevard comparable to New York's Broadway and Paris' Champs-Élysées. Off the Street lie various neighbourhoods in which users can 'build' their own private residences, to express themselves further, to keep humanizing the space and to increase their sense of belonging and status. In the physical world, Hiro lives in a shared storage unit, but in the Metaverse, his house is large and comfortable. A monorail runs along the Street to enable users to move from one location to another rapidly and comfortably. In the Metaverse, avatars mimic mundane world interactions in a fully reactive environment.

In the afterword, Stephenson acknowledges that a significant influence to his thinking about the Metaverse was the Apple *Human Interface Guidelines*, a collection of documents intended to improve the user experience through an easier use of the interface. The *Guidelines* include detailed consideration of all aspects of interface design, such as creating intuitive controls by means of command menus and organizing and managing application windows (Apple Computer, Inc. 1995)[8]. The most relevant aspect of the *Guidelines* to the current purpose is the notion of the metaphor, discussed in detail below. The concept of the metaphor, as an aid to improve understanding by creating mental connections to something that was previously familiar, is also a tool employed by ekphrasis. Yacobi (1995) essentially discusses the same strategy in her paper about the 'mental models' used in ekphrasis. Webb's suggestion that ekphrasis is a psychological process, dependent on the recipient as much as on the author, is paralleled in the *Guidelines* advice to consider the expected user above all other factors. It is recommended that designers identify their target audience and that audience's expected skill level, background knowledge, needs and expectations. Further, the *Guidelines* note that the interface experience ought to be consistent in order to facilitate quicker learning through matching of expectations. It should also have a high level of 'aesthetic integrity': the graphical interface should contribute to the greater efficiency of its use by presenting a pleasurable visual experience. Similarly, in ekphrasis, the poetic and linguistic qualities of the representation conveyed are not essential, but they increase the captivating effect on the reader.

Stephenson would have been familiar with the *Guidelines* through his work as a computer programmer in the late 1980s and early 1990s. In an interview he has noted that he retained his skills and interest even after becoming a full-time writer, although he has admitted that he has difficulty keeping up with modern programming (Slashdot 2004). Although the technological setting of *Snow Crash* was not yet possible in the first years of the 1990s, it was put together in a manner that made it more believable, more grounded in the contemporary knowledge than the cyberspace of *Neuromancer* had been. Instead of using a wholly invented jargon, *Snow Crash* refers to 'computers' instead of 'decks' and employs real, everyday computing language as used by professionals of the early 1990s, which the

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[8] Stephenson's source is likely to have been an earlier edition of the same publication: Apple Computer. *Human Interface Guidelines: The Apple Desktop Interface*. Reading, MA: Addison-Wesley, 1987.

author could reasonably expect his implied audience to understand. Even the term 'avatar', used to denote a graphical representation of the user in virtual space and originally believed by Stephenson to be his own invention, was already in use in connection to the virtual world of Habitat (see Chapter 3). The only significant neologism Stephenson presents is 'Metaverse' itself, although his work certainly popularized the term 'avatar'.

The relationship between *Snow Crash* and *Neuromancer* is not only thematic. In another interview (*Locus*, August 1999), Stephenson states outright that *Neuromancer* was a significant influence to him as a writer, calling Gibson's novel 'an amazing synthesis of several things I was interested in'. He explains that following his disillusionment with science fiction in university, he had become interested in authors such as Hunter S. Thompson and Tom Wolfe that he describes as having a very 'vivid' style. Frustratingly, he does not go into detail about what he means by describing a writing style as vivid. It was that 'vivid, literary style of writing in a science fiction book' in *Neuromancer* that made such an impression on him that he describes the experience as 'a real thunderbolt'. He explains further that *Neuromancer* was not the kind of science fiction to which he had been accustomed and of which he had grown tired. Instead of presenting a generic 'space opera', a romantic adventure in space such as *Star Wars,* the novel was set on Earth with punkish, *noir* overtones.

As documented in the interviews referenced above, Stephenson's emotional response to the vision represented in *Neuromancer* and his interest in the 'vivid' style caused him to desire to emulate such a style in his own works. We cannot pinpoint a specific instance of a visual experience, which triggered the creative process in Stephenson's mind, but the basis of the ekphrastic process can still be identified. The powerful response that he had in reaction to the mental images caused by the works of Thompson, Wolfe and Gibson led to his expanding from those images towards new narratives. In a sense, his creative process was operating along the parameters of Classical ekphrasis, as manifest in the ancient rhetoric or modern tabletop roleplaying games. The words delivered to him (in this case, by means of reading) created powerful mental visualization, a reader's actualization of the text in terms of the reader-response theory. In the similar vocabulary, as used by Lévy, Stephenson then proceeds forward in the cycle of virtual and actual by creating further potential from his

own actualization. This subsequent step in the creative cycle is powered by the inspiration brought about by the semi-visual experience. The inspiration is manifesting as an ekphrastic desire to transfer similar experiences to others.

The process of inspiration led to the potential of a multisensory narrative. The original inception of *Snow Crash* was intended as a form often described as a graphic novel published on a digital platform (Fisher 1994), and sometimes also termed as an interactive game (Slashdot 2004). As part of his exposure to the awakening digital culture of the 1980s and 1990s, Stephenson had been familiar with computer games throughout his writing career, which is evidenced in the ludic influences in the novel, as discussed above. The different terms applied to the original concept imply that what Stephenson proposed to publishers was a multimedia, multisensory experience involving not only text, but also image, sound and movement. As his idea was turned down, it is likely that the proposed new media work was ahead of its time, and, as such, presumably unmarketable due to the lack of audience with suitable equipment. For the original visual project, Stephenson and his artist colleague Tony Sheeder had consciously focused on creating visually interesting motifs to attract the attention of the reader (Goldberg 2011). These 'hooks' were transferred into the novelized version of the story. As an example, Stephenson mentions an image of Y.T., a skateboarder with a magnetic harpoon, and wild skateboard chases on American freeways. As an adaptation of a digital visual project, *Snow Crash* is a fundamentally ekphrastic text. It employs virtual ekphrasis on two levels: not only does it represent a wholly notional digital project, but it also represents a notional virtual world as part of that project.

5.2 Ekphrasis of the virtual 'metaphor'

The virtual world of the novel is first presented to the reader very early in the text:

> The goggles throw a light, smoky haze across his eyes and reflect a distorted wide-angle view of a brilliantly lit boulevard that stretches off into an infinite blackness. This boulevard does not really exist; it is a computer-rendered view of an imaginary place.
> (p. 19)

The brief paragraph occurs in the middle of a lengthy setting of scene (pp. 18-22), which takes place before the reader is properly introduced to the environment of the Metaverse. Several details in the scene are significant. Hiro and his roommate Vitaly Chernobyl are 'chilling out in their home'. Hiro is sitting at a low table, wearing goggles and small earphones. In contrast to the usual context of 'jacking in' in *Neuromancer*, Hiro is not working or frantically trying to solve a puzzle. As part of the new kind of casual, humanized virtual envisioned in the novel, he is relaxing in the virtual world. To use the framework proposed by Ryan, the virtual has now acquired a function that is pleasurable and artistic, without necessarily possessing any concrete benefit or value. The escapist aspect of the pleasurable function is already acknowledged at the end of the passage: 'Hiro spends a lot of time in the Metaverse. It beats the shit out of the U-Stor-It.'

The goggles throw a haze across Hiro's eyes, which are subsequently noted as being 'beneath this image'. The virtual landscape, described in strongly human terms, is established as an image. Indeed, it is described as 'a computer-rendered view'. The eyes are primarily required to perceive it through the visual sense (although the earphones indicate that the sense of hearing also has a function), but the mention of a 'haze across his eyes' implies that the vision is partly clouded. What is seen is not really there. The implied illusion is confirmed by the summary of the virtual landscape: 'This boulevard does not really exist; it is computer-rendered view of an imaginary place.' This one sentence contains three ways of stating that what Hiro is perceiving is not real.

The passage veers away from the virtual world to describe, in detail, the equipment that makes the existence of the virtual world possible. Here, it is called 'the computer', in accordance with the use of contemporary real-world terminology. The computer is

described in minute detail. The description does not, however, fulfil the requirements to be considered ekphrastic. The language used is plain, with few poetic details: 'It does not have a power cord, but there is a narrow translucent plastic tube emerging from a hatch on the rear.' Only the necessary information is provided. Moreover, Heffernan's definition of ekphrasis requires the original visual item to be a representation of something else. The computer is just a computer, although it occupies an important position in the narrative due to its role as the reflecting device. Yet, the computer itself is not a significant motif. Instead, it enables the most significant motif throughout the narrative: the Metaverse. The passage describes in detail how the image of the Metaverse is created in Hiro's vision, comparing the process to 'much the same way as the electron beam in a television paints the inner surface of the eponymous Tube'. Television is an example of technology that also employs artificial imagery, but which is very familiar and, hence, 'safe' to the implied reader. The mention functions as an explanatory comparison, an appeal to the reader's background knowledge in order to make the subsequent full introduction to the Metaverse (pp. 23-25) more comprehensible.

Throughout the narrative, the text constantly emphasizes that the Metaverse is an artificial construction, which is not part of the tangible mundane world. As examples of the frequently used adjectives and designations, it is 'computer-generated', 'imaginary', 'not real', 'fantasy world' and 'It does not really exist'. During the reader's first full encounter with the Metaverse, several paradoxes are pointed out. Hiro is physically present in his residence, but 'Hiro's not actually here at all' and, instead, he is in the 'computer-generated universe that his computer is drawing onto his goggles and pumping into his earphones.' The boulevard, called The Street, does not really exist, 'But right now, millions of people are walking up and down it.' The Street appears as a boulevard that follows the equator of an immense black sphere, but the physics of the construction would make the sphere bigger than Earth. Users can create 'buildings, parks, signs, as well as things that do not exist in Reality' except 'none of these is being physically built'.

> When Hiro goes into the Metaverse and looks down the Street and sees buildings and electric signs stretching off into the darkness, disappearing over the curve of the globe, he is actually staring at the graphic representation – the user interfaces – of a myriad different pieces of software that have been engineered by major corporations. (pp. 23-4)

The virtual world is identified explicitly as a representation, although, in this case, the object of the representation is not a notional (and imaginary) world, but the programming code that has been used to bring the virtual world into existence. The role of code in the process of representation is discussed further below.

Snow Crash avoids romanticizing the virtual. Hiro's point of view remains a little cynical or, at most, matter-of-fact, during descriptions of the Metaverse. There are few expressions of wonder or other strong emotion: 'So it's always a shock to step out onto the Street, where everything seems to be a mile high' (p. 24) is one of the few mentions of such emotion. The following evocation of the 'wilderness' around 'Downtown' demonstrates the maximum extent of any poetic language in the novel: '[T]he development will taper down to almost nothing, just a thin chain of streetlights casting white pools on the black velvet ground.' The text's general plainness and emphasis on the artificiality of the virtual world function as the kind of explanation about which Stephenson expresses wariness in the context of the potential film adaptation. It highlights the distance between the author's familiarity and the expected reader's familiarity about the topic. Explanation is necessary to guarantee the reader's full understanding of the events. It is incorporated into descriptions, which prevents those descriptions from becoming fully ekphrastic due to the emphasis on clarity.

As a further reminder that the Metaverse is not what it seems, but, rather, an immersive computer-generated world, the text uses the term 'metaphor'. It is used in place of the term 'immersion', as, for example, when the text discusses the process of entering and exiting the Metaverse. An avatar appearing seemingly out of nowhere 'would be confusing and irritating to the people around you. It would break the metaphor'(p. 34). An extreme example of leaving the Metaverse is brought up in the instance of Hiro 'killing' a quarrelsome fellow avatar in a bout of the Metaverse's swordfighting game.

It breaks the metaphor. The avatar is not acting like a real body. It reminds all The Black Sun's patrons that they are living in a fantasy world. People hate to be reminded of this.
(p. 95)

Similarly, in terms of avatar behaviour, and for the same reason, avatars do not attempt 'physical' gestures with each other, because tangible touch is not available in the virtual world. Although the Metaverse allows for extremely imaginative self-expression in the avatars the users wear, those avatars are still, paradoxically, expected to conform to the laws of physics as present in the mundane world. In a yet further paradox, The Black Sun's 'cartoonish' physics, 'so that particularly obnoxious people can be hit over the head with giant mallets or crushed under plummeting safes before they're ejected' (p. 51), appear not to have the same effect. It is as if the 'metaphor' is particularly tied to the representations of the users themselves and their interaction with the environment or each other. Considering the higher value attached to 'realistic', i.e. mimetic avatars, as discussed below, it is possible that the greater disturbance of the metaphor results from an increase in the uncanniness of avatars that do not follow expected patterns.

The concept of the metaphor is probably Stephenson's most significant influence from the Apple *Human Interface Guidelines*. The 1995 edition explains metaphors as concrete, familiar ideas already known to the user, so that the user can apply those expectations to the use of the computer interface. As examples, the *Guidelines* gives the ideas of the 'desktop', 'folders', 'trash' and 'menu', all of which are long-established physical concepts applied to the computer user interface. As early as in 1982, D. Smith, C. Irby, R. Kimball, B. Verplank and E. Harslem discussed the user's conceptual models of the 'office' and the 'desktop' in context of methodologies for designing user interfaces. The computing metaphors, such as the 'cloud' in 2014, enable the user to get a sense of the function of an application or a programme without having to concern him- or herself about its exact workings, particularly in cases where little background knowledge is present. Metaphors in computing operate as they do in language, and, specifically for the current purpose, in creating ekphrastic evocation. The willingness to engage with the text or operating system in a reader/user becomes the greater, the more relatable the material at hand is to him/her.

At no point does Stephenson clearly indicate what this great 'metaphor' stands for: whether it refers to the avatars alone, or to the virtual environment in general. The quote from the text referenced above states that when Hiro looks over the vista of the Street and the curve of the enormous globe, what he is actually seeing is a representation of software. The graphic representation of a set of different software is identified as the user interfaces. The process of representation is not explicitly linked to the concept of the metaphor, but the metaphoric notion of representing one thing by means of another is very strongly present. The danger in breaking the metaphor is to reveal/remind the true state of matters to those who do not wish to be reminded of them. As the term 'metaphor' is used in contexts where today's reader would expect the term 'immersion', we can conclude that in *Snow Crash*, 'metaphor' stands for the process of the human desire to perceive matters through a method that makes those matters more emotionally appealing by presenting them in another form. Such process allows greater engagement (of whatever kind) to take place.

Another example of the notion of the metaphor used to make software more emotionally attractive, and hence more comprehensible, is the Metaverse's daemons, the virtual entities who are in a servile relationship with the human users. As another example of employing real-world terminology, Stephenson adopts and adapts the concept of the 'daemon' from the technological language of his own time. In explaining the concept to the reader, the text, once more, heavily emphasizes the artificial nature of the illusionary environment:

> "Daemon" is an old piece of jargon from the UNIX operating system, where it referred to a piece of low-level utility software, a fundamental part of the operating system. In The Black Sun, a daemon is like an avatar, but it does not represent a human being. It's a robot that lives in the Metaverse. A piece of software, a kind of spirit that inhabits the machine, usually with some particular role to carry out. (p. 51)

While the daemons mimic sentience, they are to humans what the Metaverse is to the mundane world: a metaphor. They have no actual sentience, so they cannot provide an endogenous point of view within the Metaverse. Unlike the AIs in *Neuromancer*, ineffable, godlike beings, who are able to affect the lives of humans and shape virtual space according to their will, the daemons are closer to the anthropomorphic programs of *Tron.* Yet, instead of treating their creators with worship, their attitude appears professional. Ironically, despite being referred to by the pronoun 'he', Hiro's librarian daemon is perfectly aware of

its own nature as a constructed entity: 'I was not coded by a professional hacker, per se, but by a researcher [...] who taught himself how to code' (p. 101). Like Flatline in *Neuromancer*, but without his bitterness – or, indeed, without any obvious emotion, beyond the occasional sarcasm – the Librarian keeps reminding Hiro (and through him, the reader) of its origins. 'Ask someone real', it advises Hiro in return to a question, adding that 'Since I am just a piece of code, I would be on very thin ice to speculate' (pp. 196-197).

The term 'daemon' appears as an ironic development from *Neuromancer*: the programs with which humans now work are, indeed, 'demons', but in another, more benevolent sense. At the geocritical level, the term strongly brings in the intertextual, comparative and interdisciplinary connotations. The term originates in ancient Greece, where *daimones* were generally benevolent, or neutral, spirits with a variety of tasks in the natural environment. In Plato's *Symposium* (202e), the daemons are described as acting in the domain between mortals and gods, transporting and interpreting words and goods from one cosmic faction to another. In computing, the term 'daemon' to describe a program operating as a background process originates in the concept of 'Maxwell's daemon' of physics and thermodynamics, an imaginary agent sorting out molecules in the background. The daemons in *Snow Crash* very much operate on the background, as per their scientific semantic ancestors: they humanize the operations necessary for the full functions of the Metaverse, such as, in the case of the Librarian, information retrieval. Further, they supplement the population of the virtual space to increase the 'metaphor'. On conducting these operations, they step into the role of the ancient spirits, as they provide a literally 'human' interface between the users and the realm of the virtual, transporting and interpreting commands and their executions from one party to the other. They demonstrate the kind of interface that the relationship between word and image appears to lack: a force that translates from one mode of representation to the language of the other, as, on a computer, a graphical interface translates between human and machine language.

5.3 The ekphrastic dynamic in the virtual gaze

The primary conflict in the novel is centred on the eponymous virus which damages human brain functions as well as the inner workings of a computer. The infection takes place as a user looks at the code of the virus, presented as a graphic in the Metaverse. When Hiro is offered Snow Crash outside The Black Sun Club, Hiro is puzzled by the situation because of the simulated nature of the virtual world: '[Y]ou can't sell drugs in the Metaverse, because you can't get high by looking at something.' (p. 39) In its ironic denial, the text foreshadows the subsequent plot and also attributes the process of looking a crucial importance. Later on, as Hiro investigates, the original assertion is beginning to waver: 'You can't get hurt by looking at a bitmap. Or can you?' (p. 177) The gaze is associated with remarkable power and outright danger. Although such an association is familiar to us from the works of Lessing, Mitchell and Heffernan, to name but a few, the novel suggests that the power of the gaze has a rational, explainable, physiological basis. Juanita explains to Hiro that the digital information coded in the binary form of the graphical representation of the virus directly enters the brain via the optic nerve: '[I]f you stare into a person's pupil, you can see the terminal of the brain.' (p. 186) The explanation implies that the power of the gaze is not mystical or otherwise unfathomable. Stimulation of the optic nerve simply causes reactions in the brain. In order to examine the gaze in the Metaverse, two passages will be considered in detail. The first one comprises of an introduction to the Metaverse's users, seen from Hiro's perspective (pp. 33-41). In the second one, Y.T. visits the virtual villa of the Vietnamese computer expert Ng (pp. 206-212).

Before the text moves on to discuss the residents of the Metaverse, some important information is provided to the reader. Although the Metaverse is seemingly an escapist contrast to the novel's mundane world of extreme bureaucracy, as seen in 'the Feds', and to the bigotry and insularity of burbclaves like the racist 'The White Columns', even the virtual world is subject to its own hierarchies and class society. The fundamental key aspect is the issue of owning a computer, from which to access the Metaverse. The text highlights the motif of the computer as a symbol for global inequality.

In the real world – planet Earth, Reality – there are somewhere between six and ten billion people. At any given time, most of them are making mud bricks or field-stripping their AK-47s. Perhaps a billion of them have enough money to own a computer; these people have money than all of the others put together. Of these billion potential computer owners, maybe a quarter of them actually bother to own computers, and a quarter of these have machines that are powerful enough to handle the Street protocol. That makes for about sixty million people who can be on the Street at any given time. Add in another sixty million or so who can't really afford it but go there anyway, by using public machines, or machines owned by their school or their employer, and at any given time the Street is occupied by twice the population of New York City. […] Put in a sign or a building on the Street and the hundred million richest, hippest, best-connected people on earth will see it every day of their lives. (pp. 24-5)

Stephenson's hierarchy of privilege starts at poverty and violent unrest and it builds up towards higher levels through financial resources and interest in information technology. Even those who have the money but cannot 'actually bother to own computers' do not count among the 'richest, hippest, best-connected people' who visit the Street in the Metaverse. The scenario of wealthy people not wishing to own computers is far more characteristic of the early 1990s than it is of the present day, when owning a computer is, more or less, a necessity. Those who are unable to afford a sufficiently powerful computer, but use the Metaverse anyway through public computers, occupy a higher place in the privilege pyramid than those who can afford one but do not wish to do so. Even Hiro, being 'a talented drifter', 'can't really afford the computer either, but he has to have one. It is a tool of his trade.' (p. 20) Ownership of a computer, even against the odd, indicates a positive, enterprising spirit.

The reader might expect that in contrast to the mundane world and to the unprivileged or uninterested people, the Metaverse would be a utopian realm of benevolent anarchy and equality. When Hiro arrives on the Street and gazes at the other users there, it quickly becomes clear that the 'social classes' in the Metaverse are strictly separated by the looks of their avatars and by their possessions – ironically, exactly like in the real world that the reader knows. The most basic division between 'classes' is based on the type of avatar the user wears. The text introduces the concept of the avatar, 'not […] real people, of course. […] The people are pieces of software called avatars. They are the audiovisual bodies that people use to communicate with each other in the Metaverse.' (p. 33) The avatars are noted to reflect their users. Hiro watches two young couples emerge from a local point of entry, assigns them as 'four teenagers probably on a couch in a suburb of Chicago, each with their

own laptop' and the text notes he and they would be unlikely to speak to each other in the mundane world, so they would not do so in the Metaverse either.

The text emphasizes that an avatar can look any way at all and its looks are only based on the user's choices: 'You can look like a gorilla or a dragon or a giant talking penis in the Metaverse' (p. 34). Nonetheless, creative self-expression is valued below 'realistic', properly mimetic avatars. Hiro's avatar is noted as looking just like Hiro, apart from clothing. Later on, when Juanita enters the picture, Hiro recognizes her avatar 'by the way she folds her arms when she's talking, the way she tosses her hair' (p. 52). As two of the creators of the Metaverse, Hiro and Juanita already occupy high positions in the virtual society, and their status is evident in their mimetic avatars: 'Most hacker types don't go in for garish avatars, because they know that it takes a lot more sophistication to render a realistic human face than a talking penis.' (p. 34) A comparison is made with people who appreciate the difference between a cheap wool suit and an expensive wool suit.

The privilege pyramid of the novel's mundane world, discussed above, is reflected in what may be termed an aesthetic hierarchy of the Metaverse. Money, together with interest, which becomes skill, enables transition to higher social status. Avatars customized to mimetically match their users, and avatars that are custom-made but 'garish' in their imaginativeness are followed by standardized, 'off-the-shelf' avatars. Hiro's judgement of the two couples is based on their ready-made avatars: 'The couples coming off the monorail can't afford to have custom avatars made and don't know how to write their own.' (p. 34) The couples' position in the wider privilege pyramid is low enough, due to their lack of money and interest/skill, but their respective statuses can be divided even further. One couple have constructed their own avatars out of miscellaneous ready-made parts, as one would create an avatar for a graphical role-playing game today, while the other couple are wearing an uncustomisable set of avatars that resemble Mattel's Barbie and Ken dolls in looks and names. The 'Brandy' model is oversexualized, with 'three breast sizes: improbable, impossible, and ludicrous' and 'a limited repertoire of facial expressions: cute and pouty; cute and sultry; perky and interested; smiling and receptive; cute and spacy' (p. 35). The male version, the 'Clint' is 'craggy and handsome' with a limited range of expression, although the text – and Hiro's point of view – does not go into the same kind of

detail. The off-the-shelf models are presented as stereotypical, cartoonesque representations of men and women, according to which the men fit into the 'strong and silent' action hero type and the women are modelled as pure sex objects.

Neither of the uncustomized virtual genders is offered a voice; Hiro's point of view dismisses both, with emphasis on their lack of expression. Rather than focusing on the suggested gender roles, his objection is the poor quality of the software, which leads to clumsy rendering of the models: 'Her eyelashes […] are rendered as solid ebony chips' (p. 35). The judgement of Hiro's gaze is based on the technical quality of the representation, as that quality comes to represent the user's interest and skill. The concept of quality encompasses both the technical aspect and the stylistic representation. In a symbiosis of both factors, a strict mimesis is preferable to the fantastic and/or poor technical presentation. Significantly, the faults at presentation are not even considered as problems with the hardware that those users are using. The faults are directly translated as problems, visible shortcomings, of those users personally. The meaning of the concept of representation is lost, as representations are identified with their users. Specifically, those users are automatically perceived as lower class. The two couples, due to the differences in their avatars, 'are clearly from disparate social classes' (p. 35). The virtual lower class is perceived as inferior to the viewer, as demonstrated by the derogatory designation in Hiro's perspective: 'When white-trash high school girls are going on a date in the Metaverse, they invariably run down to the computer-games section of the local Wal-Mart and buy a copy of Brandy' (p. 35). In addition to the avatar's looks, a lower status in the Metaverse is assigned by the visible lack of ownership of virtual property, in another use of derogatory language: 'If you are some peon who does not own a House', that user's avatar can be seen materializing in a Port and having to make its way to the Street by means of walking or public transport, instead of appearing in that user's personal house. In the Metaverse, class is constantly evident in the visual representations, and, as such, constantly subject to the gaze and judgement of the other users.

Lower still in the Metaverse's internal aesthetic hierarchy than 'Clints' and 'Brandies' are 'black-and-whites', representations of users who access the virtual world from public

terminals. Rendered in 'jerky, grainy black-and-white' (p. 38) they lack realism and technical quality:

> Talking to a black-and-white on the Street is like talking to a person who has his face stuck in a xerox machine, repeatedly pounding the copy button, while you stand by the output tray pulling the sheets out one at a time and looking at them. (pp. 38-9)

As in the case of the poorly rendered off-the-shelf avatars, the avatars from public terminals explicitly demonstrate the artificiality of the Metaverse. As discussed in 5.2, 'breaking the metaphor' – reminding the users that they are in a simulation – is considered bad manners, even a taboo. Consequently, those who outwardly display the true nature of the Metaverse, even through no actual fault of their own, become a pariah class, as demonstrated when Y.T. enters the Metaverse from a public terminal:

> As soon as she steps out into the Street, people start giving her these looks. The same kind of looks that people give her when she walks through the worsted-wool desolation of the Westlake Corporate Park in her dynamic blue-and-orange Kourier gear. She knows that the people in the Street are giving her dirty looks because she's just coming in from a shitty public terminal. She's a trashy black-and-white person. (pp. 205-6)

The black-and-white, like Y.T. in her Kourier uniform at the Corporate Park, stands out of the comfort zone of conformism. The descriptor makes an obvious allusion to racial inequality: those who suffer from prejudice in the virtual world are not 'black', or, indeed, 'white' – they are 'black-and-white', anyone at all who has the misfortune to have to access the Metaverse from a public computer. Virtual prejudice is not based on the users' actual skin colour, or, as far as the Metaverse indicates, gender, but on the looks of the user's virtual representation, which is assumed to be a direct reflection of his or her personal resources, skill and interest.

Hiro's arrival at The Black Sun club shows that the gaze can mark a distance even within a seemingly distance-less virtual environment. The club is the heart of the Street, as the Street is the heart of the Metaverse. The passage describing the club brings forth two notable instances of irony. The virtual building is simple and 'extraordinarily somber': it consists of 'a squat black pyramid with the top cut off' (p. 37), with one door, above which is the sign and the logo of the club. This is explained by the fact that 'When Da5id and Hiro and the

other hackers wrote The Black Sun, they didn't have enough money to hire architects or designers, so they just went in for simple geometric shapes.' (p. 37) The club stands out of its environment by being a simplified monochrome representation of an idea of a building. In essence, it is exactly the same as the simple black-and-white avatars. 'The avatars milling around the entrance don't seem to care' (p. 37) that the club lacks distinct architectural features, even despite the fact that earlier, the text has made the point that Hiro's residential neighbourhood is inhabited by very good programmers, so 'The houses look like real houses. There are a couple of Frank Lloyd Wright reproductions and some fancy Victoriana' (p. 24). The appreciation of mimesis, present in the avatars and in the residential areas, does not seem to carry through to include The Black Sun.

The other ironic aspect of the passage is the translucency of the avatars. Above, it has been stressed how important it is to retain the illusion of realism in the Metaverse. Houses which look like real houses and people who look and behave like real people are valued higher than those who do not. Yet, nothing is said about the metaphor of the Metaverse suffering from the fact that when a large number of avatars gather in one place, all of them become translucent: 'Hiro appears solid to himself, but everyone else looks like a ghost' (p. 37). It is also when he crosses the boundary to The Black Sun that he becomes visible to the masses, and they also to him. It appears that the demand for realistic representation is, itself, partly illusionary and subjective, something to brush aside when there is a practical need. Alternatively, we can suggest that, as Castronova observed, technological immersion is secondary to emotional immersion. The Black Sun is a highly significant location in the Metaverse. One of the few paragraphs employing clearly ekphrastic language demonstrates the emotional value attached to the club. When Hiro has stepped out of the crowd over the border to The Black Sun and turned around to look at the crowd, he has also made a concrete gesture that sets him apart from the masses, as a creator, rather than a user. The crowds do not recognize him, but they see his entry to the exclusive club and understand his privilege: 'But in the entire world there are only a couple of thousand people who can step over the line into The Black Sun' (p. 38). The crowd respond by shrieking as though to a rock star or to a popular actor.

He turns and looks back at the ten thousand shrieking groupies. Now that he's all by himself in the entryway, no longer immersed in a flood of avatars, he can see all of the people in the front row of the crowd with perfect clarity. (p. 38)

When Hiro leaves the public space, he steps into the privileged space reserved for, among others, the original creators of the Metaverse. If we consider the Metaverse to be an artwork, then its creators must be considered artists, or, at the very least, artisans. The artists are able to enter their own artwork, but even within that artwork, they have a restricted space, which enables them to be present in and apart from the artwork at once. No longer immersed in the crowd, Hiro is separated from it by his gaze, by the active process of looking. Due to his own status, marked by the access privilege to The Black Sun, he literally stands apart from the crowd. When he passed through the translucent masses, he was part of them, and the gaze had little to focus on. The lack of distance meant the lack of active looking. The segregation of the elite and of the general populace has brought about the ability to gaze from a critical distance – and to judge by means of that gaze.

Hiro is gazing at his own artwork, which is an interactive mixture of environment and users. He sees the users trying to vie for the attention of The Black Sun elite. While Blanchot suggests that the distance creates a desire to get into intimate contact, and Chapter 2 puts forward that the viewer's desire to attain such a contact with the artwork lies at the source of the fascination/fear dualism linked to the gaze, here, effectively, the artwork gazes back at the viewer. Because the users and their creativity form such an essential part of the Metaverse, they become the artwork that is imbued with desire to make contact with and be approved of by its ultimate creator:

> They are all done up in their wildest and fanciest avatars, hoping that Da5id […] will invite them inside. They flicker and merge together into a hysterical wall. Stunningly beautiful women, computer-airbrushed and retouched at seventy-two frames a second, like *Playboy* pinups turned three-dimensional – these are the would-be actresses hoping to be discovered. Wild-looking abstracts, tornadoes of gyrating light – hackers who are hoping that Da5id will notice their talent, invite them inside, give them a job. A liberal sprinkling of black-and-white people – persons who are accessing the Metaverse through cheap public terminals, and who are rendered in jerky, grainy black and white. […] There are would-be rocks stars done up in laser light, as though they just stepped off the concert stage, and the avatars of Nipponese businessmen, exquisitely rendered by their fancy equipment, but utterly reserved and boring in their suits. (p. 38)

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The implied strong emotional desire in the users present has resulted in them creating the 'wildest and fanciest' avatars described. In this instance, the language turns from its usual plain style towards ekphrastic characteristics. A number of unnecessary adjectives and intensifiers appear. Verbs seek to evoke the movement they represent by their sounds – the avatars 'flicker and merge', some appear as 'tornadoes of gyrating light'. Similes and metaphors are used in a richer literary style. The descriptions of the different user types are varied, which gives an impression of a multilayered scene with a great deal of detail and colour present. A sense of movement penetrates the paragraph. The sentences contain a number of hyphens to evoke images of the crowd moving in one direction, stopping, and then moving in another direction. The impression of movement in the 'artwork' viewed by the artist at a distance reminds us that a virtual world is not a still piece. In the case of traditional artworks, such as painting, theorists have suggested that ekphrasis enlivens such works by creating narrativized movement out of stillness. Here, ekphrasis does not force movement out of the stillness of a painting. Ekphrasis operates like programming code: it represents in words what is already present in the moving images of the notional virtual world.

A confirmation to the notion that, in the Metaverse, the gaze separates and judges based on skill, which is expressed in the avatar, can be seen in Y.T.'s visit to Ng's virtual villa, particularly in its first section (pp. 206-7). Above, her entry to the Metaverse as a black-and-white was already referenced. Without considering the entire passage, it would be easy to suggest that the prejudice of the gaze belongs to Hiro alone. While the gaze was discussed above from the point of view of the gazer, in this case, we see the effect of the gaze on the person/avatar being gazed upon. Additionally, Y.T.'s own gaze operates in the process, as it forms its own judgements, based on the interior of the virtual building, Ng himself and her own avatar in that environment. Contrary to Hiro, the creator/artist, Y.T., who is just a user, judges herself in an inferior position. She forms her interpretation based on Ng's house and on his avatar, following the usual expressions of status in the Metaverse. We do not get Ng's perspective and thus it is impossible to say whether Y.T.'s interpretation is correct. Nonetheless, because the issue of gaze and the encounter with the visual is, in all cases, very subjective and emotionally loaded, we can examine her experience as complementary information to Hiro's position.

The style of the virtual villa is given in a straightforward introduction, which assumes architectural or historical knowledge of the reader: 'Ng's Metaverse home is a French colonial villa in the prewar village of My Tho in the Mekong delta.' The narrative takes a brief step away from Y.T.'s perspective, as she is at no point depicted as a particularly well educated teenager. As the passage reveals later, she has heard stories about World War II Vietnam from her grandfather, but she generalizes and stereotypes the information she has: 'The Vietnamese, like most other Asians, hate the Japanese.' Her immaturity shows in her reaction to the simulated Vietnamese landscape: she wonders whether the 'twisted and spooky' virtual land also has 'bombings and strafings and napalm drops. That would be the best.' The narrative returns to her point of view, noting that 'this guy is a fairly hardcore techie' because Y.T. see hundreds of computer-generated 'little Vietnamese people' working over rice paddies and moving around the village, 'all of them well rendered and all of them doing different things.' The issue of the combined effect of skill and interest appears immediately. Although Y.T. is not a computer expert herself – 'She's not a bithead' – she still recognizes the skill present in Ng's simulation, 'that this guy is throwing a lot of computer time into the task of creating a realistic view out his office window'.

Y.T. demonstrates that she is aware of the Metaverse rules regarding the metaphor, i.e. the immersive process. Ng unsettles her by following them and breaking them at the same time. On the one hand, he appears to be receiving a massage from a daemon, but the daemon 'is just a picture […]. And you can't get a massage from a picture.' Ng is breaking the taboo of physical contact in the Metaverse, but immediately afterward, he bows to Y.T. in greeting. It is at this point that the reader begins to get a glimpse of Y.T.'s increasing discomfort. The text displays her negative emotional reactions to evidence of Ng's skill: 'This is how hardcore Street wackos greet each other' in order to avoid the breaking of the metaphor, but Y.T. has just seen Ng engage in a physical activity, which should not be possible. When Ng performs another physical gesture by drinking, Y.T. is unsettled further, although the text focuses on the perfection of the representation:

> Globes of condensation form on its surface, break loose, and trickle down the side. The rendering is so perfect that Y.T. can see a miniaturized reflection of the office windows in each drop of condensation. It's just totally ostentatious. What a bithead.

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Y.T. expresses her own insecurity by the derogatory terms applied to Ng, 'wacko' and 'bithead'. Having arrived at the villa wearing a black-and-white avatar, she experiences a strong self-conscious reaction as a result of the skill displayed in the environment, evidenced by her own gaze, and on being subjected to the gaze of the creator of the virtual place. Although the text states that there is no emotion visible in Ng's face, as he looks at her, 'Y.T. imagines that it is a face of hate and disgust'. In her insecurity, resulting from the avatar she wears, and from her own lack of skill, she concludes that Ng is disgusted at having spent a great deal of resources on 'the coolest house' in the Metaverse, only to have a pariah of the virtual world defile it by her very presence – 'some skater come in done up in grainy black-and-white'. There is no confirmation from Ng in any way, but Y.T. seems to follow the general attitudes of the Metaverse. Her reaction points towards a possible explanation to the problematic position of the image in past studies of the relationship between the viewer and the image. Let us consider that at least part of the feeling of unease and 'threat' associated with the image, may originate in the viewer's own feeling of inferiority when faced with a demonstration of highly developed skill.

Against the background of the aesthetic hierarchy of the Metaverse, the character of Juanita stands out as an interesting exception. When seen in the Metaverse, she appears as a black-and-white avatar. According to the social customs of the virtual world, she should be subject to as much prejudice as all other similar avatars. Elsewhere, such as in the case of the two couples discussed above, we can see that the gaze of Hiro lingers longer in the females than in the males, although it is not clear that the judgement is more pronounced in terms of gender. The text displays awareness of gender stereotypes, particularly in connection with the virtual. When Da5id is infected with the Snow Crash virus, the dangerous visual is presented by a 'naked' 'Brandy'-style daemon, which both men find hilarious in its stereotypicality. Their amusement mocks the tendency of feminizing the image. In another instance of similar awareness, the text highlights sexism in the computer industry. After Hiro has seen Juanita in The Black Sun, she is introduced in a long digression. She is credited as the programmer who perfected the avatar faces, now held as their most important feature, but at the time thought unimportant: 'It was, course, nothing more than sexism, the especially virulent type espoused by male techies who sincerely

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believe that they are too smart to be sexists' (p. 53). The astute commentary could also be applied to the traditional image of the supposedly passive 'female' role in the process of ekphrasis.

Although *Snow Crash* does manage to generally avoid stereotyping its female characters, it still reserves them to particular symbolism. At first glance, the two major female characters, Y.T. and Juanita, and the minor female character, Y.T.'s nameless mother, have little in common. Y.T. is little more than a street urchin, her mother an oppressed worker in a Kafkaesque institution, and Juanita a highly respected programmer. Because of her famous, work with the avatar faces, Juanita's poor quality black-and-white paradoxically avatar transcends the social rules and enhances her status further. While everyone in the club turns to look when she walks out, 'the hackers purse their lips and stare reverently' (p. 65). Ironically, although she is described in less than complimentary terms as 'a dour, bookish, geeky type who dressed like she was interviewing for a job as an accountant at a funeral parlor' (p. 52), she draws everyone's attention because she has provided others with their faces, their identities, and, crucially, 'she was the one who figured out a way to make avatars show something close to real emotion' (p. 59). Juanita has brought an essential aspect of the physical world to the Metaverse.

Whereas Y.T. fully represents the non-virtual, the world of Reality – 'Try a little Reality, man', she advises Hiro (p. 112) – Juanita, with her supreme position in the Metaverse, knows both worlds intimately and has chosen Reality. The text explains that she never comes to The Black Sun, because she finds the Metaverse 'bogus', false: 'That no matter how good it is, the Metaverse is distorting the way people talk to each other, and she wants no such distortion in her relationships' (p. 60). While Hiro spends the majority of his time in the Metaverse 'inside' the artwork, in the public areas outside the exclusive Black Sun, Juanita has chosen a full critical distance. All three female characters are strongly connected to the physical world. The Metaverse remains a subtly male space, domain of Hiro and Da5id, and a realm of imagination and dreaming.

5.4 Ekphrasis in writing a dynamic picture

The outward appearance that regulates social status in the Metaverse is seen as a reflection of the user's skill at programming, or the lack of it. Those with the highest programming skills are the most respected. Programming, or coding, as it is often known today, becomes a method of creating visual art, comparable to painting or sculpting. Code is that which gives rise to everything visible on the computer screen. It is, therefore, useful to examine the role of coding as present in *Snow Crash* in more detail. In particular, a significant aspect of coding is the analogue of writing. In the novel, the hackers are said to 'write' environments into existence. This usage is consistent with real-world language. We say that programming code is 'written' by programmers. Different types of programming are called different 'languages'. They consist of words and mathematical symbols and they follow their respective rules of 'grammar', as well as on mathematical operations. A very simple example of the operation of text and mathematical functions together can be taken from the programming language called Python:

```
>>>def hello (thing):
…      text = "Hello, " + thing  + "!"
…      print text
…
>>> hello ("World")
Hello, World!
```

The output of this code produces the greeting 'Hello, World!', a common first exercise in many programming language tutorials. The code itself involves both recognizable English words such as 'hello', 'text' and 'print' and mathematical operators '=' and '+'. The mathematical operators function as a grammar of sorts to bind the words together according to preset rules and the programmer's wishes. Code is not purely language, nor is it purely mathematics. Yet, among its many other functions, it can be used to create still and moving images on the computer screen. The desired function passes through the 'translating' methods of the compiler, which makes the high-level programming language, understandable to humans, readable by the machine, and through the computer's graphical interface, aided by the necessary hardware. As a demonstration of the novel's context in relation to the real world technology, the process of translating between human and machine language is outlined by Hiro in a conversation with the Librarian.

The element of mathematics, as present in code, is new to the discourse on ekphrasis, which has hitherto focused on the dualistic relationship between word (language) and image (the visual expression). *Snow Crash* plays with the representation of visuals by numbers. The instance in question represents the visual environment of the Street in terms of mathematics. The Street's apparent illusionary length is given as 65,536 kilometres. The text reduces the number to the essential building blocks of a virtual world – its 'atoms.'

It happens to be a power of 2 – 2^{16} power to be exact – and even the exponent 16 is equal to 2^4, and 4 is equal to 2^2. […] 65,536 is one of the foundation stones of the hacker universe, in which 2 is the only really important number because that's how many digits a computer can recognize. One of those digits is 0, and the other is 1. Any number that can be created by fetishtically multiplying 2s by each other, and sub-tracting the occasional 1, will be instantly recognizable to a hacker. (p. 23)

The text represents the mathematics by means of words rather than by direct mathematical equations. It focuses on the fact that a computer only recognizes the digits 0 and 1, which, on the very base level of computer operations, form the foundations of programming code. The machine language, into which human-oriented high-level programming languages must be translated, appears as sets of binary numbers such as 00001010. This machine language, based on binary mathematics, then contains in itself both language and image. Programmers, or 'hackers' are claimed in the novel to have an instant affinity with significant numbers, which lie at the base of the manipulation of the virtual world.

Due to his personal background as a programmer, Stephenson would have been aware of functions of code. Among the frequent mentions of the constructed, 'un-real' nature of the Metaverse, the novel regularly notes that the virtual environment is 'written' into existence. '[I]t's just a computer-graphics protocol written down on a piece of paper somewhere' (p. 23). The process of writing is equated with the act of creation – 'When Hiro first saw this place, ten years ago, the monorail hadn't been written yet; he and his buddies had to write car and motorcycle software in order to get around. They would they take their software out and race it in the black desert of the electronic night' (p. 25). Although Hiro and his friends are noted in the novel as the creators of the Street, the text implies that there was 'something' in place of a void that could be shaped and explored by them. It is notable

that the act of creation in the Metaverse is not called 'drawing'. Despite the importance of aesthetics in the virtual society, there are hints that a further creative layer, visual design, remains a skill separate from the actual construction. The description of The Black Sun Club notes that at the time of its creation, Hiro and Da5id could not hire architects or designers, which is why the building is a simple geometric shape. The act of creation is linked with 'writing' and the concept of language, which follows the novel's theme of the power of the spoken and written word.

As a concrete manifestation of that theme, the novel constructs a retelling of the ancient Sumerian myth known as Inanna's Descent. Juanita tells Hiro that she is inspired by Inanna, Sumer's most famous female deity, and hints that she is about to follow in the footsteps of the goddess. Hiro's research reveals that Inanna is known for having brought to the people of Sumer from the keeping of the god Enki the *me*, the 'algorithms for carrying out certain activities essential to the society' (p. 240) as the Librarian puts it: statecraft, war, arts and crafts, or, according to Hiro, 'The operating system of society'. Both Hiro and the Librarian connect mythic expressions to computing terms. In the Descent myth, Inanna descents into the world of the dead. When, after three days, she fails to return home, Enki manages to retrieve her from the netherworld. Ultimately, Inanna is successful in her attempt to conquer the mysteries of life, death and resurrection. Thus, she gains a considerable amount of highly valuable knowledge. In Stephenson's retelling, Juanita assumes the role of Inanna, and Hiro the role of Enki, 'the hacker god' (p. 297), who is interpreted as having creative and transformative power through his understanding and use of language.

Language as a means of control is directly linked to the computer coding that controls the Metaverse, as seen in the following examples: 'The same way that a hacker, knowing the secrets of a computer system, can write code to control it' and 'Enki had the ability to ascend into the universe of language and see it before his eyes. Much as humans go into the Metaverse' (p. 259). Hiro speculates that a realm of language is made manifest in a concrete, visual way – effectively, as a fulfillment of the Kriegerian posit about natural language, according to which that which represents and that which is represented become one and the same. Similarly, Hiro's comparison evokes the ekphrastic fear suggested by

Mitchell: the prospect that words could potentially become the visual that they seek to represent, with the borders between word and image irrevocably blurring. The Snow Crash virus reduces the humans it has infected to a 'primal' state, a symptom of which is a repetition of syllables from an 'ur-language'. The virus is a language designed to 'program' humans in a way that demolishes borders between states of being and leaves mental processes incomprehensible.

Hiro compares the Sumerian language to machine language, written in binary code, which lies on the base level of computer operations. Any so-called 'high level' programming languages simply translate the human intentions into the machine language for the computer to understand. It functions as a translation, the same way as a graphical interface translates human language into computer language, as observed above. Both word and image are able to perform in the same kind of role. The infected humans, for their part, become real-world counterparts to the daemons, as they provide an interface between human language and the Mesopotamian 'ur-language', which is as incomprehensible to humans as binary machine language. As the novel discusses the power of language, and, by extension, of images, it also strives to rationalize everything traditionally thought supernatural, such as religious thought. As Enki of Sumer is interpreted as a mortal man with the power to control, persuade and create through language, so is code cast in the role of a toolset for a modern-day wizard.

> Nowadays, people don't believe in these kind of things. Except in the Metaverse, that is, where magic is possible. The Metaverse is a fictional structure made out of code. And code is just a form of speech – the form that computers understand. (p. 197)

What appears at first glance as mystical and inexplicable – in the way of Gibson's cyberspace – turns out to be perfectly rational, based on science, and, crucially, under human control, contrary to the domination of the AIs in *Neuromancer*.

The creation by means of code, rather than, for instance, painting, means that the artwork in question is no longer necessarily still. As underlined earlier, Mitchell and Krieger have suggested that ekphrasis is a moment of stillness in the narrative, as the flow of events stops to examine a particular visual. Moreover, the traditional view on ekphrasis suggests that

even in its narrative stillness, an ekphrastic text enlivens the still artwork by providing it with imaginary movement and a multisensory depth. The famous example of the 'Ode to a Grecian Urn' by Keats imagines the images painted on the vase in motion and with purpose. The Metaverse, on the other hand, is also an artificial representation, a visual artwork, but it is never still. Hiro engages in vehicle chases, fights and exploration, whilst still being aware of his physical presence in the mundane world. In a virtual world, the image does not 'need' the text of ekphrasis to enliven it; it already incorporates movement in itself. Further, it allows interaction and direct immersion from the part of the users.

As an example, a headhunter makes a dramatic entrance to bother Hiro:

> A passing fighter plane bursts into flames, falls out of its trajectory, and zooms directly toward him at twice the speed of sound. It plows into the Street fifty feet in front of him, disintegrates, and explodes, blooming into a tangled cloud of wreckage and flame that skids across the pavement toward him, growing to envelop him so that all he can see is turbulent flame, perfectly simulated and rendered. (p. 36)

A number of commas delineate the activity into short textual panels, like images in a comic strip, even as internal broken rhymes of the dramatic action verbs of 'bursts', 'falls', 'zooms', 'plows' and 'explodes', followed by 'blooming' and 'growing' assume the place of the onomatopoeia of 'KA-POW's and 'BANG's that the reader would expect in a superhero narrative using the serialized image. The origins of the novel as a notional graphic novel can be detected in the cartoon-like representation. The vivid image of a mechanical destruction is brought to a soothing end by a reminder that all the action has only simply been part of the virtual world's simulation – the activity has been 'rendered' as a series of impossibly quick images. The reminder of the simulation is followed by simulation's unravelling – 'Then the display freezes, and a man materializes in front of Hiro' (p. 36). Hiro, not interested in the man's employment offer, demonstrates the artificiality of the situation by walking straight through the display.

The virtual action is exaggerated and cartoonish, deliberately so, to emphasize the difference from old-style, static representations. The function of the verbal representation is no longer to imbue a still image with life, but it becomes, ironically, almost 'illustrative': the words have little to add, because the movement is already there in the visual

representation. In such a circumstance, considering ekphrasis from Heffernan's perspective of mutual struggle for dominance, words are theoretically unable to gain the upper hand. However, in *Snow Crash*, as in all texts considered in this thesis, words represent notional virtual spaces. Therefore, words are necessary in order to convey to the reader the idea of the Metaverse. The nature of a virtual space, which allows movement and interaction to take place within a representation, means that in virtual ekphrasis, word and image exist in a more equal relationship. The image does not need support from the word to come alive, but it does need the word to transmit the experience. Unable to add anything to the virtual image, the word's strength lies in the power of its transmission – the power of evocation, and also in the creative power which can make 'visible' even an image that does not exist.

Code, the newly defined 'writing' of visuals, actions and events into being, incorporates in itself text, image and mathematics. The underlying mathematics, the binary code and the operations, act as an interface between the human level of language and the machine level. The output of code is not so much a subsequent step or a new stage, as it is a representation of the same code in a new form. The code, too, is another side of the same coin – it represents the output, visual or otherwise, in the form that consists of language and mathematical symbols. Because the visual (for example) is constructed out of the code, in one sense the digital visual is the code and the code is the visual, only, metaphorically, viewed through different lenses. This way, code, which can be used to construct not only still but also dynamic scenes and situations, resembles natural language. The natural language does not fully come into being, because, particularly in case of visuals of virtual worlds, the visuals and their underlying code are intended to represent multisensory, natural environments, which are typically notional rather than fully derived from the real world. Although a virtual world strives to be a full environment unto itself, it still operates on the basis of representations of users, buildings, living creatures and plants that are too closely connected in the human mind to the real world to assume a conceptually independent existence in the virtual.

At the same time, code can be described as an instance of what may be termed 'true ekphrasis': a successful representation of a visual representation by means of text. In true ekphrasis, any potential struggle between word and image fades. The image is created by

means of language on the supporting frame of mathematics. Even though language would first seem to have power over the visual, that power is pointless if it is not actualized in anything. In terms put forward by Lévy, the visual actualizes the potential present in the code intended to create a visual. In code, the relationship between word and image becomes much more mutually comfortable than the ekphrastic tradition has allowed for them in previous discussions.

5.5 Ekphrasis in *Snow Crash*: metaphor

In its treatment of the virtual as a strongly humanized space, created by and intended for human use, *Snow Crash* brings up important elements of ekphrasis in the digital context. The primary consideration is the emphasis on creation by code. This process makes it possible to create a moving, dynamic, holistic artwork that interacts with the viewer/user and that does not need text to 'enliven' it. In such a case, ekphrasis assumes a clear sharing function. The text is needed to pass on the experience to others who have not been directly present. If the original experience is imaginary, to begin with, text is needed to give it substance, to actualize it more fully in the minds of the readers. The novel makes the point that such actualization is very strongly an individualized experience, through a considerable use of irony in the discrepancies between the stated attitudes of the characters and the described circumstances of the virtual world. Even if black-and-white avatars are generally ostracized, one can be treated with admiration and affection if it suits the individual user better. The actualization also depends in the emotional connection in the individualized experience: even if the black-and-white avatars break the immersion through their bad quality representation, the immersion can be 'repaired', and even intensified, if the emotional response to the avatar, or any other similar situation, is strong enough.

The construction by code makes it clear that the artificial visual that is the virtual world is not only a representation of a notional, fantastic space, but, more concretely, of the code itself. We can, of course, suggest that a painting is representative of the paint itself, as much as it represents the scene it depicts, but this thesis puts forward the idea that code is, in a sense, more 'active' than 'analogue' methods of visual representation. Code contains elements of language and mathematics working closely together. The synthesis of those

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elements contains, directly in itself, the information needed for the eventual representation. What becomes the visual is already there in the code, but it cannot be perceived by humans in a visual manner. In order for the visual to be seen, it is necessary to translate the code through a compiler. Equally, in order for a visual, or a space, to acquire sufficient significance to make an emotional impact, it needs to be processed through the human 'compiler': the psychological filters that attribute meaning based on previous personal experience and intertextual knowledge. Ekphrasis, also, acts as a kind of compiler by translating a non-personal experience into a personal experience.

Consequently, when we discuss the verbal representation of a digital visual representation, we are already talking about a representation that goes a layer further than traditional ekphrasis. If Keats's 'Ode to a Grecian Urn' represents the paintings on a vase, which represent the notions of people and their experiences, ekphrasis based on digital matter represents the visuals of that matter, which themselves represent not only the relevant notions, but also the underlying code, which also represents the same relevant notions. An avatar is a notion of a human, which is first encoded in the computer program in the appropriate programming languages. It is then represented visually in a graphical form in its appropriate context, in the virtual world. An evocative textual description of that avatar represents the graphical form, which represents the code and the original notion. The graphical representation, the primary function of which is to make it easier for the perception of the human user, is called in the novel a metaphor. 'The metaphor' refers to the entire state of the virtual world, just as the metaphor of a desktop refers to the user dashboard on most operating systems. The metaphor, the representation, is the human interface for the use of the underlying operations. Similarly, we might suggest that ekphrasis is the human interface for the visual when the visual is not there to be directly experienced.

6. The everyday virtual in Charles Stross's *Halting State* (2008)

Charles Stross's 2008 novel *Halting State* reworks the modern 'myth' of the superprogrammer in the context of the third decade of publicly available digital technology. The premise of the myth remains intact: an introverted, slightly socially awkward male programmer solves a crime that threatens both the virtual and the real world by means of his mental abilities, with the help of a female interest, whose own talents belong to the real world. At the same time, the context of this instance of the myth, well past the heyday of cyberpunk, requires that the story is made accessible and attractive to a reader who is assumed to be very comfortable with information technology. Presentation is no longer a matter of spending a great deal of the text providing explanation on what virtual is and how it works, as the implied reader is presumed to have the sufficient background to sufficiently understand the topic. The context of the reader in the real world dominated by digital media creates a new freedom for the text. Instead of an 'education' of sorts, the novel is able to focus on new devices of invoking its own concept of the virtual.

The most significant new device the novel employs is its adoption of the narrative in the second-person. It is introduced in the first page, but not until the third paragraph, which is entirely composed by the single, detached sentence, 'Which jangled Inspector McGregor's bell and completely ruined your slow Thursday afternoon' (p. 5). The colloquial style, which includes abbreviations, mild profanities and deliberate ignoring of grammar rules initially confuses the reader, but the confusion is subsequently somewhat dispelled by the introduction of the starting situation: 'You're four hours into your shift, decompressing from two weeks of working nights supervising clean-up after drunken fights on Lothian Road and domestics in Craiglockhart' (p. 5). Instead of indicating a potential first-person narrator or a general sentiment, the pointed 'You', by which the sentence begins, refers to the point of view; not the actual reader, or even the implied one, but to a character in the novel that the reader is asked to impersonate. This role is established in the same sentence. A shift-worker in a high-intensity job relating to public order – a law enforcer – in an English-speaking location, which is immediately recognisable as Edinburgh, through the use of real world place names, to those familiar with the city. The city is explicitly named a few pages later (p. 13).

The narrator becomes entirely separated from the point of view. A narrator is implied to exist, as the events are narrated by a voice, but the narrative is filtered through the second-person perspective. The point of view is not a controlling agent, either – the invisible narrator has the events happen *to* the point of view without its foreknowledge, not at its behest. The technique is familiar from tabletop roleplaying games, computerised roleplaying games and from interactive fiction. It is this connection that makes a further step in the second-person technique more comprehensible. The overall narrative is filtered not only through one point of view, but through three distinct individuals. The chapters shift between the voices of Sue Smith, an Edinburgh police sergeant; Jack Reed, a computer programmer; and Elaine Barnaby, a forensic accountant. Each point of view is narrated in the second-person. Unlike in conventional roleplaying games or in the case of interactive fiction, the reader of *Halting State* must adjust his or her own perspective to match that of the currently active point-of-view character, rather than simply that of one alone.

All three characters encounter and mingle with each other over an investigation into a virtual crime. The plot centres around a robbery in the novel's virtual game world called Avalon Four. Within the game, a group of users 'wearing' game-appropriate avatars have managed to raid the game's 'central bank', which holds the players' most treasured virtual possessions, by altering the parameters of the game: '[S]*omething* – we're not sure what – nerfed our admins back to level zero and cast a Time Stop on everyone in the room. That's a distressingly high-powered spell, and it normally affects just one target at a time' (p. 16). In other words, the initial crime in *Halting State* is exactly how the respective conflicts in *Neuromancer* and *Snow Crash* are resolved: by adapting the existing parameters to suit the purposes of the hacker. *Halting State* continues and expands from where the two previous works end, acknowledging that the real-life technology and knowledge has developed to the point at which programming skills are not simply a solution, but also a problem. The robbery has financial and political implications due to threatening a vast loss on the game company's share price, which is why Elaine is called in to investigate the economic aspect of the crime. As she is expected to perform part of her investigations inside the virtual world, she hires Jack to act as her guide to the game.

In addition to online games such as Avalon Four, the concept of the virtual also occurs in two other innovative examples. Firstly, the novel extensively employs the notion of augmented reality. By means of headsets, users are able to view their ordinary environments transformed either wholly or in part. The police officers constantly avail of information encoded into graphical symbols: 'There's a thicket of twirling tags above the entrance: Chris, Maggie, Mohammed, and a blue diamond marker blinking blues and twos' (p. 90). Gamers use the technology to overlay their day-to-day surroundings with the imagery of their preferred entertainment: 'The bus trundles past ominously looming hunchbacked houses, cars replaced by noisome horse-drawn wagons, pedestrian commuters by a mixture of dwarfs, golems, werewolves, and humans from various periods of History-Land^{TM}' (p. 132). Computer-generated graphics are no longer restricted to computer screens or to headsets used in isolation. They communicate, cooperate with and replace the real world in a complex series of different dynamics.

The temporary replacement of the real world with an imaginary one is taken further in the second example. An Alternate Reality Game (ARG), in the novel also called a LARP (Live-Action Role-Playing) casts the player in a role that must be acted out in real life. The game's objects are tangible, real-life objects, its players real people in appropriate roles. The virtual world of such a game arises from the participants' imagination, their consensual stepping aside from the real world into one that is 'overlaid' on it by the mental visualisation alone. In the novel, the overlay by imagination is supported by overlay by technology. On the one hand, Elaine takes a voice phone call from 'Spooks Control' with instructions to deliver a physical parcel to a particular location in Edinburgh:

> You pocket the bugging device, or whatever it is, key the co-ordinates into your specs, and let the overlay guide you along the pavement towards the target building. This sort of nonsense is partly why you've been thinking of retiring from **SPOOKS**; it's almost tediously realistic. (p. 154)

On the other hand, she finds the location by following the game overlay, which subsequently warns her of approaching strangers. In the case of ARGs, technology does not act in a dominant role, but provides reinforcing support to the player's imagination.

The motif of the game penetrates the novel through all its layers. The starting situation centres on the financial and political repercussions of a crime in an online game. As Elaine's ARG foreshadows, the plot transports the characters into the world of murder and espionage, a 21st-century version of 'The Great Game' played between political entities over the supremacy of a strategically important geographical area – and, in this case, the global information network. 'This is not a game', various characters keep repeating to each other, in an ironic denial of the central premise of the novel. The characters play games throughout; so, in a way, does the reader who tacitly agrees to take on the roles of the three points of view in this literary imitation of roleplaying games. As the main point of view narratives of the novel close and the reader prepares to step away from the literary game, the final words of the point of views emphasise the ludic nature of the text. 'Game over' (p. 327), ends Jack's point of view, as a conversation with Elaine has revealed him as an unreliable narrator, with an imaginary family set up as an ARG. Sue's point of view, and the entire direct narrative, ends with 'We're not playing games anymore' (p. 335). The 'game' of the three-person narrative is framed by the transcripts of two fictional emails, respectively as a prologue and as an epilogue. These segments, outside the three narrative points of views, provide additional information on the plot to the reader, and, metaphorically, function as 'credits' or 'supplementary materials' to the narrative 'game'.

The semi-ludic format of the novel – which places the reader in the role of a character but does not present the reader with any choices characteristic of roleplaying games or interactive fiction – comes to form a significant contribution to the current discussion on virtual ekphrasis. Directly inspired by games, other virtual worlds, and also by Stephenson and Gibson, as discussed below, the novel represents several different notional computer-generated graphical environments by means of words. Further, it forms its own game-like environment by inviting the reader to actively participate in the story. This chapter will explore the different levels of ekphrasis employed by the novel: 1) The general immersion created by the second-person narrative 2) The interplay between computer-generated and 'real' elements of the setting in the instances of Augmented Reality, and 3) Specific instances of intense experience of the full notional computer-generated environments.

6.1 *Halting State* as a response to technology and gaming

The works of Charles Stross have been subject to very little scholarly analysis, most likely partly due to their recentness, and partly because of a probable perception of them as conventional genre works with little depth or complexity. Stross himself has extensively discussed his own work and his own life on his personal blog (Antipope.org) as well as on Twitter. His willingness to engage in conversation with his readers provides a significant amount of material to support the current literary analysis. As discussed in Chapter 2, the most efficient delivery of ekphrasis requires mutual comprehension and ability to sympathise and relate from the parts of the writer/speaker and the reader/listener alike. By actively providing explanatory background material, Stross is increasing the level of familiarity between himself as the author and between his readers, to create a more suitable context for the latter. In essence, Stross is priming his readers to be more receptive of his material. As per the principles of ekphrasis, emotional engagement is at its easiest when the author and the reader approach the text from backgrounds that are as alike as possible.

In a blog post (22 June, 2013) dedicated entirely to the creative process of *Halting State*, Stross notes that he has been interested in virtual reality since reading *Neuromancer* and *Snow Crash*. Like Gibson and Stephenson, Stross is usually categorized as a science fiction writer, although, in recent times, all three have turned away from overtly futuristic features towards indeterminate or very near-future texts. These texts are often indistinguishable from those overtly set in the present day, save for a greater emphasis on technology than is typical in contemporary works of the crime genre, for instance. As the general level of familiarity with technology is rising, the emphasis on technology in works set in the present way is equally increasing. *Halting State* is set in an independent Scotland in the second half of our current decade. It lacks all common science fiction tropes: it sports no spaceships, aliens, interplanetary travel, time travel, political realignment on Earth or a significantly novel relationship between humans and technology. The new technology envisioned in *Neuromancer* and in *Snow Crash,* as has been demonstrated in this thesis, was conceptually farther in the future at the time of publication than the AR headsets connected to enhanced mobile phones, suggested in *Halting State.* Must a literary work be necessarily classified as science fiction if it takes place a few years in the future, particularly when real world events

almost certainly quickly render it more or less obsolete? Stross himself calls *Halting State* 'mundane science fiction': fiction that lacks the above-mentioned tropes but deals with social change and believable technology.

Stross demonstrates himself as an author who is highly aware of his contemporary context and the dynamic between the present real world and fictional literature set in the near future. In a commentary of Scotland's impending independence referendum, Stross (@cstross) tweeted on 7 January, 2014, 'I am *so* wishing I was writing another Halting State/Rule 34 right now. This stuff is inspirational.' and 'They're basically performing the Schroedinger's Cat thought-experiment on an entire nation. Makes writing near-future SF hard!' On 30 March, 2014, Stross returned to the concept of what he (too) calls 'near-future SF' by remarking on Twitter that 'Novels are a tough medium for reactive political commentary, but it'd be negligent to ignore Snowden, Wikileaks, et al in near-future SF.' While real events may quickly bypass fictional events (cf. the outcome of the Scottish referendum), real ones may also provide an impetus and inspiration for further fictional ones. This dynamic is also evident in the literary dealings with space. Stross observes that 'VR seems to exemplify the modern SF paradigm of information space in much the way that the idea of interplanetary exploration exemplified the old paradigm of real space.' He links these paradigms specifically to science fiction, but as we have seen, the definition of science fiction can sometimes be misleading. Considering the interest in space in the past few decades, and the growing interest in digital space in the past thirty years, we can suggest that such paradigms are also present in the mainstream and not simply limited to a special interest genre. Thus, virtual reality indeed comes to represent the whole concept of artificial space made up of programming code. Stross has voiced the main rationale of this thesis: if we are interested in examining the representation of the digital in literature, we need to focus on the representations of immersive computer-generated environments, regardless of what we may wish to call them.

Stross's inspiration for the novel was sparked by an anecdote of a man wishing to report a crime at a police station: he had bought a magic sword but he claimed that it was not enchanted correctly. The situation had taken place in context of an online game and drew Stross's attention to the interaction between real world and virtual economies. Real money

can be used to buy virtual items in a virtual world, and, conversely, economical transactions in the virtual world could have an effect on the real world, not to mention the immense commercial value of many online games. Stross notes that he heard the anecdote during the early 2000s, when *Second Life* was new and exciting. As discussed in Chapter 3, virtual reality, in its various manifestations, had seemed to go into hibernation after the initial enthusiasm in the 1980s and 1990s. With the increase of computing power and internet connections in the early 2000s the prospects seemed optimistic again: '[I]t suddenly looked as if, after being fiction for a decade, and then hanging fire due to GPU performance issues and motion sensors not being up to snuff for another decade, it was finally coming through' (Stross 2013). Stross makes the point that he himself 'dabbled' at *Second Life* at the time and also owned his first smartphone. We may infer that relevant technology had arrived, literally, to within a hand's reach, and the largely mobile information network of *Halting State* seemed like a reasonable future development. Stross goes into some detail in explaining his approach of juggling between the familiar and the envisioned:

> 90% of the world would be the familiar already-here universe of my home town: 9% would be the predictably-there stuff of the proximate future — take Intel or ARM's road maps for the next three years today and three years ago: draw a straight line extrapolation to get to where our capabilities will be in a decade (yes, I know that's a naive approach, but it works for fiction): and 1% bugfuck strange […]. In addition I assumed everyone would be using 3G or 4G mobile broadband and wearing their smart lifelogging device/mobile office on their head (as BT's Peter Cochrane was doing in the late 1990s): and with ubiquitous GPS integration and imaging, it'd be possible to map a visual representation of the internet onto the real world. (Back in the 1990s HP research were looking into defining an HTTP-like protocol for retrieving information from the internet based on the GPS location of the requester; I assumed a distributed, dynamic DNS-like protocol for servicing such requests would be available by 2015[…].) (Stross 2013: online)

Stross's reasoning is strongly based on his own professional knowledge on computing, evident in the language and specialized terminology used in this passage. The necessity for the 90% familiarity of the setting would demand mostly believable technology, with which the readers could relate by being able to easily imagine themselves using it. He references several IT companies strong in the 1990s, demonstrating the continuously self-replenishing link between real-word technology and fictional technology. His mention of a smart lifelogging device or a mobile office anticipates Google Glass which is coming to the market at approximately the right time for the year in which *Halting State* is set. Signs of people's attraction to the concept of lifelogging are even now evident in the popularity of

visual social media platforms and applications such as Instagram and SnapChat. This novel could not have been written in the 1980s or 1990s. Its inception required the state of online technology to the point that virtual worlds were viable and economically significant, and the advancement of mobile technology to the point that their 'smart' use to access the internet was visible in the future of only a few years. Had Stross, or someone else, attempted similar features in earlier works, the 'familiarity horizon' between the reader and the technology described would have been too wide for a comfortable comprehension on the reader's part. Gibson had addressed the issue of unfamiliarity by making it a fundamental aspect of *Neuromancer*, whereas Stephenson chose the strategy of explaining the artificiality and constantly reminding the reader of it.

Usually, in the case of ekphrastic texts, the inspiration for the creative process lies in a visual that causes a particularly powerful stimulative reaction in its viewer. In the case of *Halting State*, that stimulative experience is bound to the potential Stross saw in the linking together of the real world and the virtual. Unlike the passionate experience of a visual, typical of the first steps of the ekphrastic process, this novel's origin is not bound to any particular personal interest of the author, but to the possibilities present in the mixing of borders between the real and the virtual. Stross himself does not identify as a gamer. Even then, although the source of inspiration seems to be further removed from the visual, the creative work itself is delivered through a textual mechanism with a very strong visual aspect. The motif of the game that operates at all levels of the novel is rooted to the exchange between the virtual and the real taking place in the context of a gaming company. Stross's strive for a situation that is believable to the reader of 2008 is the fundamental underlying factor. In his blog post, he quotes 'a friend' observing that MMOs are the first successful virtual realities to gain more than a million users. A significant exchange between the virtual space and the real space requires a sufficiently large userbase. In order to discuss the connection between the virtual and the real, including the effect that one has on the other, Stross saw the commercial field of online gaming as the most relevant avenue for his idea. The importance of the concrete mutual influence, economy, is an indication of the mundanization of the digital. Digital technology has become so commonplace that it has become an economic resource.

The factors of believability and concrete real-world relevance help understand Stross's statement that the novel was to be told in the second-person, because it would involve a gaming company. The present-day relevance of the gaming company invites the reader to consider games and the process of playing them, as well as their comparison with textual fiction. In his blog post, he references text adventure games, briefly quoting Colossal Cave Adventure, 'you are in a maze of twisty little passages, all alike.' He does not admit to having played these games, but he clearly has considerable familiarity of them. Stross's novel and his description of its creative process create the first direct link between the history of roleplaying games, computerized and otherwise, as outlined in Chapter 3. As we have seen, text adventure games contributed to the development of graphical computer games, but in this case we can also see the connection between both those formats and texts involving virtual ekphrasis. While *Neuromancer* and *Snow Crash* developed from the same material in a more complicated process – via the authors' respective visual inspirations – *Halting State*, effectively, goes directly to the source and makes use of that material.

Despite claiming lack of skill at modern computer games, Stross still displays an extensive knowledge of real contemporary gamer jargon throughout the novel. The use of such specified language has two effects. On the one hand, it further increases the believability of the novel. It heightens the ability of the reader to relate to the text and to get immersed in it, provided that the reader has the sufficient background knowledge of games to understand the jargon. On the other hand, it very strongly connects the novel to its publication time in the first decade of the 21st century. Because the jargon has not yet substantially changed, the novel still remains understandable, assuming that the reader has the sufficient background knowledge. As the jargon changes, as it inevitably will, the novel's language will become at least as unfamiliar as Gibson's invented terminology in *Neuromancer*. In this sense, the novel itself reflects how individual games tend to 'flower' for a relatively short period of time. With the exception of *World of Warcraft*, which has remained popular for a decade, 2004-2014, most other online games have experienced a brief burst of popularity during and soon after their launch, before their players have moved on to the next new and exciting game. Similarly, after a reader has finished *Halting State*, he or she is expected to move on to another novel. The relevance that is closely attached to the 'present', including its temporary nature, the format of the second-person, the constant

references to games including turns of phrase, and ekphrasis of games all create a *mise en abyme* of a 'game within a game', comparable to the 'play within a play' device favoured by Shakespeare, among others.

The metaleptic 'game within a game' motif is present in the foundational structures of the novel's fictional virtual setup. Avalon Four and the other named game worlds of the novel are 'located' in the network of an online game platform known as Zonespace, which is set to run distributed across mobile phones. Zonespace is a meta-space that is generally not experienced by users in itself, but, rather, when a user logs into one of the games, he/she is present in the broader Zonespace as well. It is not possible to be present in more than one game world at once. The features of the Zonespace structure are not described in any great detail, as the implication is that it functions more or less like an online version of a game console such as PlayStation or XBox: it contains the games and makes them possible, but it is the games themselves that offer greater relatability and interest. Another contemporary equivalent would be the online platform known as Steam, which allows gamers to own and play games stored online.

The Zonespace games mentioned in the novel have a strong intertextual element by appearing as fictional game adaptations of certain imaginary worlds known today. Avalon Four itself is openly based on *Dungeons and Dragons*. 'It's basically a fairly faithful implementation of Dungeons and Dragons, fourth edition D20 rules. Just like the old Bioware series, except it's a Zone-based Massive', Jack informs his new employers (p.72), allowing the text to create a connection in the reader's mind to the popular single-player computer games such as *Baldur's Gate* (1998) and *Neverwinter Nights* (2002). Again, the connection requires the reader's familiarity with the reference. The segments of the novel that are set within Avalon Four are laden with references to *D&D*: the band of orcs that commit the robbery at the virtual bank, other fictional races such as halflings, dark elves and slaadi, location called Castle Greyhawk, and mentions of iconic spells familiar from the roleplaying system such as 'fireball'. In the 1980s Stross contributed to the development of *Dungeons and Dragons* by inventing several monsters for the game system, including the demonic slaadi. Much of the game-related jargon used in the novel is equally applicable to

the old *D&D* and to the modern MMOs, which, once more, illustrates the connection between the two categories of games.

Another similar adaptation in the novel is Discworld, based on Terry Pratchett's series of fantasy novels: 'You hop the bus from the high street out to Drum Brae, shifting the time with a wee dip into Ankh-Morpork' (p. 132) The AR game, already quoted above as turning passers-by into fantastical creatures, only merits a brief paragraph. The game is noted as being far less popular than Avalon Four: 'There are only couple of icons spinning over the players' heads, though – Discworld™ isn't too popular among the nine-till-five set. It's all a bit drearily boring, so you drop out of the overlay' (p. 132). The intertextual reference to Pratchett's works may act as a tribute of sorts, although Jack's perception of the setting as boring acts as a possible indication of an ambivalent attitude. Nonetheless, the reference functions as another anchor point to the contemporary popular culture. As much as it helps define the novel's own setting, it also helps to define the readership: a reader who is likely to be reading this novel is also likely to have knowledge of these references.

The avoiding of boredom is a significant motif in the text. Typically, the virtual appears in preference to the mundane. The attitude is introduced early on, at the same time as the reader is given the first glimpse into the novel's virtual. When Sue is first shown recording of the virtual bank robbery in Avalon Four, the virtual landscape is compared to 'an exotic holiday ad, banishing the rainy Edinburgh afternoon outside to the level of a dreicht grey parody of reality' (p. 13). The game world appears more real than the real, and more attractive than the ordinary day in the real-world city. The introduction of the virtual, paralleled but contrasted with the introduction of the real, establishes the dynamic between the two. The implication of a competitive relationship, in which the virtual is on the point of emerging dominant, resembles the suggested rivalry between word and image in ekphrasis, as put forward by Krieger, Mitchell, Heffernan, and, in a different context, Bolter. Like the struggle between word and image, the dynamic between the virtual and real is unresolved, as although the virtual seems more attractive, it is the real that is necessary for a true progress of situations.

In the above case, Jack quickly tires of the Discworld game, but even then, he spends his bus journey reading his virtual newsfeed. For Elaine, Spooks is 'tediously realistic' (p. 153) because of its real-time and mostly real-world nature. Despite the protestations of her point of view, Jack observes her deep focus when she is contact with the game controllers:

> Something you read about **SPOOKS** comes back to you, that it was deliberately designed to punch female escapist buttons. […] sometimes just the promise of a life less ordinary. People will pay through the nose for excitement: is it any surprise that they'll take it if you're giving it away for free? (p. 210)

The desire to avoid boredom is crucially linked to theme of game running through the novel. The human urge is shown as an exploitable resource. In a game 'you can't tax them or make the money decay, because that would be No Fun, and if the game stops being Fun, why play?' (p. 56). If players stop playing, game companies start losing money and no longer feed the greater economy.

On another occasion of avoiding the boredom of the real in favour of the excitement of the virtual, Jack and Elaine visit a games convention at the Scottish Exhibition and Convention Centre in Glasgow. Using the AR technology, they are able to transform 'booths and garish displays and sales staff looking professionally friendly' into a scene 'full of monsters and marvels'.

> A sleeping dragon looms over a pirate hoard, scales as gaudy as a chameleon on a diffraction grating: it's the size of a young Apatosaurus, scaly bat-like wings folded back along its glittering flanks like a fantastic jet fighter. Beyond it, a wall opens out into the utter darkness of space, broken only by the curling smoke-trail of a nebula and the encrusted flanks of a scabrous merchant spaceship trolling the final frontier for profit or pleasure. Half the sales staff have morphed into gaudy or implausible avatar costumes, from caped and opera-hatted Victorian impresarios to swashbuckling adventurers. (p. 175)

In itself, the scene of a convention/trade show is another instance of the novel's rootedness to the present and to the gaming culture. The location of the event, the SECC, exists in our real world. Stross, as a frequent guest of honour at conventions, is familiar with their general style. Once more, he is bringing his own experience to his fiction, but in a way that will be instantly recognizable and relatable to his readership. The slight cynicism of 'the usual intrusive rubbish' of the entrance survey and of the description of the event,

'everything looks like, well, the kind of trade show that attracts the general public' are another indication of a certain ambivalence regarding certain manifestations of popular culture. The plainness of the language used to describe the mundane setting of the show gives way to language filled with imaginative similes and details in the description of the AR overlay. The richness of the visual is reflected in the textual techniques. Here, the text approaches ekphrasis, but the paragraph is too brief to attain the full power of the examples discussed below. The instance serves to textually divide the virtual and the mundane further apart, even when the AR overlay appears to bring them closer.

Halting State demonstrates a strong awareness of the concept of space and divides its narrative into several different, although connected, levels. The first level is the mundane setting: the recognizable and familiar Edinburgh, Glasgow and London. They are only separated from our reality in 2014 (and from the reality of the novel's publication in 2008) by the details of driverless cars, changing climate, high oil prices and further developed wearable technology. As discussed above, even the differences are based on believable situations rooted on Stross's own life experience and the political and technological reality of the time of his writing. The second level is the augmented space, the computer-generated overlay on reality, for the purposes of utility (the police) or entertainment (AR games). A separate, third level, is the artificial reality space – Spooks and similar setups, which impose a mostly purely imaginary overlay on the mundane world with the help of physical objects and related computer-generated information alike. The fourth level is the full virtual space, that which is perceived by a user when he or she logs in to a virtual world. The full virtual does not replace the real as AR technology does, but creates an additional 'pocket dimension' of the virtual inside the real.

The dialogue between characters plays with this notion of the division between the real and the unreal throughout the novel. 'Avalon Four? Isnae that a game?' asks Sue at first (p. 10), introducing us to the fundamental question of the novel early on – what is a game, and what is not? 'Are you game for it?' (p. 97) Jack asks of Elaine as he introduces her to Avalon Four. 'This is a game, remember' (p. 148), he assures her, but 'this isn't a game' (p. 166) is what Sue and her superior are told by an agent of an intelligence service. The latter sentiment is echoed by Elaine to Jack at the convention, '*This isn't a game,* Jack' (p. 182)

in a chapter titled with the same phrase. '*This is not a game*', occurs again when Jack and Elaine receive further information in a driverless taxi (p. 201). Once more, the two are told by an intelligence agent, 'this is no longer a game' (p. 211). The repeating sequence of sharply conflicting arguments for and against the 'gameness' of the narrative functions to unsettle the reader, who is already in the unfamiliar reading space of 'acting out' the roles of the three major viewpoints. For the reader, the narrative is a game of sorts, because the reader has become part of it by assuming the three roles, but, at the same time, it is not a game, because the reader has no choices and no autonomy regarding the narrative.

The question of the extent of 'the game' is expanded to apply to real life, too. With the penetration of information technology into all aspects of everyday life, the novel asks how it is possible to distinguish where a pretension ends and reality begins. The relevant phrases keep being repeated in various forms in the second half of the novel – 'it's all just a game', 'we're onto their game', 'these fuckers aren't playing games', 'this is not a game' – until Jack admits, 'Real life isn't a game, there's no undo, no reload. I've played too many games: real life scares me' (p. 294). His statement is a hint of things to come; but it is not until the end of his narrative that the reader learns that the threat that has supposedly acted as his motivation has not been real. His sister and niece have been threatened, but it is now revealed that they themselves are not real. Rather, they are part of another game, a Sims-like system that assigns fictional family members to the players, who then act out as though the simulated family were real, to the point of telephone conversations and present-buying. 'I couldn't handle being on my own' (p. 326), Jack's point of view explains.

By attributing the simulation of family to a negative situation, to a lack, the text follows the Baudrillardian thinking that simulation is the ultimate falsehood, which is inferior to reality and must be guarded from attempting to usurp reality. The simulation of family has been made possible as a response to Jack's dissatisfaction – 'lonely years of death-march work and playing at real life, tired of emulating the society you've been cut off from for so long' (p. 326). The concept of playing is equated with falseness in a negative sense: rather than providing stimulation and entertainment on top of an already fulfilled life, it is implied that playing of games happens when something is missing from a real-life situation. When, at the end, Elaine reassures Jack's point of view that he is no longer alone, Jack's response,

which ends his entire point-of-view narrative, is 'Game over', a phrase familiar from early video games indicating that the player's game session had ended. The loneliness has ended, the lack has been addressed. Therefore, there is no longer a need for a game. Simulation has given way to reality. At the end of the subsequent and final chapter, the message is reinforced. The final words, 'We're not playing games anymore', addressed to Sue's point of view, also close off the entire three-partite narrative. The reader has completed his/her job by providing a platform for the three points of view, and finished the 'game'. As the reader closes the book, he or she returns to reality, as a gamer returns to reality after a game session is over.

6.2 'Ekphrasis' of the immersive second-person narrative

The second-person of the novel is familiar as a poetic device. Countless poems and songs have been written to a named or an unnamed 'you'. In most of such cases, however, the second-person is used in an address, as the lyric text is written directed towards the 'you'. The object of the second-person address is assumed to be outside the text and to receive the words as a passive recipient. Keats's 'Grecian urn' is an example of this kind of second-person address. The speaker of the poem addresses the vessel and suggests to it how the images painted on it ought to be imagined. The urn is not only 'envoiced' but also narrativized. On the contrary, the immersive second-person of *Halting State* does not keep the object of the address outside, but pulls that object – the reader – into the narrative by requiring the reader to assume three individual roles in sequence.

Used in this kind of immersive manner, the second-person device is unusual in prose texts. Carlos Fuentes's *Aura* (1962, translated in 1965) and George Perec's *A Man Asleep* (1967, translated into English in 1990, are examples of the second-person narrative in translation. Italo Calvino uses it in *If On a Winter's Night a Traveller* (1979, translated in 1981), which, like *Halting State*, plays with the meta-concept of the medium employed and discussed by the narrative. Jay McInerney's *Bright Lights, Big City* (1984) and David Eagleman's *Sum: Forty Tales from the Afterlives* (2009) represent similar examples in English-language fiction. All these comparative examples are relatively recent, but none of them have chosen to explore the area of new media. As the publication years and the examples of role-playing

games discussed in Chapters 3 demonstrate, second-person narratives are not, in themselves, a product of digital media. They are rooted in the exploratory narratives of postmodernism, which have striven to move away from conventional characteristics. A recent comparative example from poetry that uses the immersive rather than the addressive second-person is John Redmond's 'MUDe' (2008), written in the form of a transcript of several text game adventure sessions. In each example, whether directly related to computer games or not, the reader is invited to 'step in', to become part of the narrative and part of the reading experience itself.

Webb has shown that in the Classical world, ekphrasis was understood as the process of vivid oral delivery, which made the listener feel as though he or she were personally part of the events described. This sense of personal involvement is an essential part of the feeling of immersion. An audience can be immersed in a play or film and a reader in a book without a direct personal interaction, by means of vivid imagery and skillful use of language. If a fictional narrative additionally requires active participation from the viewer/reader/listener/player, provided that he or she is willing to suspend disbelief and participate, the immersive effect is likely to considerably increase. Therefore, a fundamental element in considering virtual ekphrasis is the interactive, immersive and participatory nature of the digital graphics, such as virtual worlds, evoked in the text. As seen in Chapters 4 and 5, conventional third-person narrative is able to evoke virtual worlds in an ekphrastic manner. The immersive second-person narrative creates an additional layer of ekphrasis, as the reader is invited to vividly visualize in a participatory manner not only the virtual world of the setting, but also the setting's mundane level. In this sense, the entire narrative becomes a kind of ekphrasis, as the reader is required to engage in the necessary mental processes of visualization throughout.

The effect of personal involvement in *Halting State* is heightened further by the narrative's present tense. It creates an illusion of immediacy: a sense of the events unfolding in real life, without the ending being predetermined. Used together with the second-person address, the present tense creates a powerful tool for focusing attention – and, consequently, immersion. Ryan (2001) argues that while the present tense creates a powerful immersive effect, the immersive power of the second-person address is brief. She

suggests that after the initial jolt of the unexpected pull into the narrative space, the second-person gradually becomes detached from the reader. The reader begins to treat the 'you' almost as a third-person proper name. To Ryan, second-person narrative in sustained mode functions as an allegory of immersion rather than as an intrinsically immersive device due to the short-term effect. To properly evaluate Ryan's assertion, a qualitative study of a number of readers reading second-person and more conventional third- or first-person texts ought to be conducted. Such a project is, unfortunately, outside the scope of this thesis. In the current thesis, the second-person is considered in the context of ekphrasis, the purpose of which is to create vividness and the sense of personal involvement, or, in other words, immersion. The present tense and the second-person narrative are acknowledged as powerful tools for creating the desired qualities.

The duration of the immersive effect is likely dependent on the reader's familiarity with the second-person mode. Any effective immersion, and thereby an effective ekphrasis, requires that the writer anticipates the reader's frame of experience and appeals to it. In the case of *Halting State*, Stross has anticipated his likely reader's preparedness during his creative process. As this thesis has repeatedly sought to show, by 2008 even the general public had a reasonable familiarity with digital media and virtual worlds, in terms of online games in particular, even if they did not have personal experience of such games. Due to Stross's usual categorization as a SF author, it is likely that his expected readers would be familiar with the related interests of online games and roleplaying games. The constant references to various forms of games and culture of science fiction and fantasy support his anticipation of his readership. Therefore, a reader with the anticipated frame of reference would have experience in second-person fiction, from roleplaying games, interactive fiction or other text-based games, or from single- or multiplayer computer games. A reader primed this way would find the second-person narrative in a novel still surprising, but likely less jolting than a reader without the same experience. For the latter reader, unaccustomed to the second-person narrative, 'you' might indeed turn into a third person of sorts, while the familiar reader is more likely to retain the effect for far longer.

The short duration of textual immersion argued by Ryan, brought about by tools such as the second-person address, functions to draw the reader's attention to a particular scene or

concept. Such an effect is comparable to ekphrasis, which, in terms of Krieger's interpretation, brings the narrative to a contemplative standstill to focus on something in particular. Ryan suggests that immersive quality does not depend on the length and detail of the information provided, but on the prominence of the features highlighted and 'on the ability of descriptive passages to project a map of the landscape' (2001: 123-4), i.e. the vividness. She discusses the importance of text creating a sense of place in which the reader can be 'transported'. Rather than plain description, she suggests a number of textual devices. These include dramatization of that description involving a narrative thread 'through' the place, with a sense of movement and a sense of time passing, use of proper names, rich connotations and mention of concrete details, apparently lacking symbolic or plot-related purpose, but which function to create an atmosphere and to fix it to the reader's memory. Whilst, she notes, details should be economical but carefully chosen, as spatial immersion depends on the resonance of the text with the reader's personal frame of reference. For our purposes, Ryan's discussion is directly relevant with respect to evoking a virtual landscape through ekphrasis. Although she herself mentions ekphrasis only briefly, a great deal of her analysis can be directly aligned with the concepts of ekphrasis. The individuality of immersion can be connected to Webb's description of Classical ekphrasis as a personal psychological process.

With the view of the above, Stross is asking a lot of his reader. Even a reader familiar with the second-person narrative must sustain the immersive effect for the duration of the novel, by agreeing to be transported, first, into the novel's mundane setting, and, second, into the novel's virtual setting. Further, the reader must agree to 'play' the role required by the second-person narrative – and not just one role, but to alter between three points of view. Contrary to the initial impression that switching points of view might decrease immersion, according to Ryan's discussion, the frequent jolts in the reading process may, in fact, lengthen the sense of immersion, as the process of adjusting to the new 'you' always begins anew. There is no time to get accustomed to one role and to have the second-person lose its meaning, before it is time to switch to another and to re-adapt into a different point of view. These thresholds in the reading process also contribute to necessity for focus. Each point of view experiences mundane and virtual spaces differently. The choice of which point of view to link with which space becomes a focusing technique, even as ekphrasis of specific

instances, as discussed below, come to focus the reader's attention on specific details within those spaces.

Although the cycle through the three points of view may, in one sense, lengthen the process of immersion, it also becomes challenging to the reader, who is attempting to use the character's body, to quote Ryan, as a sensory interface to the textual world. As we consider the process of ekphrasis translating the textual world into a visual (and multisensory) world experienced in the imagination, we must analyse the extent to which the reader is prepared to identify with the character whose role he or she assumes. Such identification is not only a matter of empathizing with that character's mindset, but the ability to experience what that character experience through textual techniques. The reader's assumption of a role in a narrative, or three roles, as in this case, demonstrates the relevance of the concept of space to the current analysis. As the reader implicitly accepts the invitation to step in to the novel's mundane setting to assume a textual avatar, who then takes a metaleptic step into the novel's virtual setting to assume a further avatar, both the mundane and the virtual setting must be experienced via the 'sensory' and emotional input present in that avatar. As Maurice Merleau-Ponty (2012) has observed, the body is essential for the concept of space to exist in the first place. Westphal has consolidated the requirement of bodily presence for an experience of space in the multisensory principle of geocriticism. The experience of space, or the sufficient mental simulation of it, leads to immersion brought about by text, which, further, leads to successful ekphrasis, if the reader emotionally responds to the feeling of immersion. As the focus of this thesis lies specifically on the virtual, it is necessary to leave a detailed discussion of the mundane space evoked in this novel for a future study, beyond a brief observation of the use of the mundane setting in relation to immersion.

As noted above, much of the reader's immersion depends on his or her familiarity with the subject matter. As Ryan observes, familiarity breeds immersion, while the process is hindered by material that is difficult to understand. The mundane setting of the novel is fundamentally grounded in the city of Edinburgh, which is Stross's hometown, and thus it is reasonable to believe that the city is important to him. Real placenames are used in large numbers – Lothian Road and Corstorphine High Street; further on, Warrender Park Terrace

and the associated description of 'To your left, the Links, grassy meadow with cycle paths and ancient trees spreading their boughs over the parked cars. To your right, your typical Edinburgh tenement block; roughly carved stone blocks, rickety doors on the common stairwell shared by a dozen flats'. The description of the streetscape, with 'Bruntsfield Place behind you', enables an exact pinpointing of the events on the map of real Edinburgh. Even a reader who has not personally visited the city would be able to find the locations on the map and explore the streetviews on Google Maps. Although the plot is set a few years into the future, the careful use of real Edinburgh space in a fictional context, by an author deeply familiar with the city, on the one hand increases believability and immersion, but on the other hand it functions as a counterbalance to the experience of the (still) less familiar virtual. At the same time, the real space fictionalized in this novel stimulates the visualization of the reader familiar with the city, so that the reader's mental processes are 'warmed up' for when the virtual is introduced and further steps of visualization are needed.

While the author can assist in the reader's immersion a great deal, ultimately, immersion is only possible if the reader is willing to experience it. In the current case, the reader's willingness to assume the role(s) required by the novel is an extreme example of the process, which involves the reader temporarily feeling more present in the fictional world than to his or her own everyday surroundings. As Ryan and Murray have respectively discussed, the process of immersion has a bad reputation, due to the perception that the person experiencing immersion becomes devoid of critical faculties and is unable to assess the experience during it. Bolter has criticized immersion as passive, lazy reading, associated with a naïve reader. Ryan's counterargument of immersion requiring a considerable amount of complex mental activity is supported by this chapter's discussion on the visualization and simulation of other sensory input. Furthermore, the essence of an immersive experience is its temporariness. The switching of viewpoints in *Halting State* means that at no point does the reader get 'stuck' in a particular perspective. The regular mental jumps from one point of view to the next keep the reader alert and aware of the fiction. Further mental adjustment is required each time due to the differences between the three viewpoints. The reader is invited to visualize and mentally experience the three very different characters and their situations. Sue is an 'everywoman', who knows little about

online games and whose direct speech is often expressed in phonetically spelled out Scottish accent, which sets her apart from the other two. When the author needs to provide explanation about the relevant technologies to the reader, it is done mostly through Sue's point of view. Elaine functions as a voice of reason, who is interested in augmented virtual environments but who is able to maintain a strict border between the virtual and the mundane. When the reader first 'becomes' her, she gives logical, calculated advice to a colleague afraid of an insurance fraud. In strong contrast, Jack, the games addict, is first encountered in a state of utter confusion and panic after commiserating his recent job loss with his former colleagues in Amsterdam. The three point of views function as three different 'avatars' of attitudes to the virtual, from indifference to moderation to addiction.

In order to defeat the Baudrillardian fear of simulation taking over from reality, the simulation, and any immersive experience, must come to an end. Ryan touches upon this important aspect of the immersive experience by noting that the experience of 'being lost in a book' must be temporary and remain distinct from addiction in order to be pleasurable. Victor Nell (1988) has distinguished between 'addicted' and otherwise immersed readers by observing that the former block out reality entirely, rush through the text without savouring it and without the story remaining in the memory. The latter retain a connection between the real and the textual and retain elements of the story in their memory better. We can apply the same distinction to immersion in virtual worlds. The major conflict in Jack's narrative is not his involvement in the game of espionage, but his own unwillingness to distinguish between real and unreal.

Jack's unreliability as a narrative point of view illustrates the illusionary nature of the second-person narrative. As a character, we can presume that Jack knows the truth about his family throughout the narrative. If the reader were to fully assume Jack's role, the reader would come to know the truth immediately, as well. If the reader knew the truth about Jack's family, much of the tension of the narrative focusing on the threat to the 'sister' and the 'niece' would disappear. When the truth is revealed at the end, the reader would not have to wonder why Jack simply did not tell the truth straight away when the threats were made, and, instead, chose to play along. As noted, for Jack, everything is a game. He prefers any kind of game space to mundane life. The example of Jack

demonstrates a paradox inherent in the immersive second-person narrative. The reader (or, in the case of games, the player) *cannot* know everything about the character he or she is invited to emulate, and therefore the emulation is superficial at best. At the same time, the reader/player *must* not know everything about the character, because excessive knowledge would potentially have a disruptive effect on the experience of the plot, or the experience of the character, in less plot-oriented works. The reader/player, of course, has more information available on the second and subsequent read/playthroughs, but the reader/player never knows everything about the character.

Just as the reader/player in a second-person narrative lacks information, he or she also lacks choice. In games or interactive narratives online, choices are typically presented, but they are usually very limited in scope and have a limited effect on the narrative. The video game series *Dragon Age* and *Mass Effect* by BioWare are unusual examples in that they provide a number of radically different endings depending on the choices that the player has made along the way. Even in those cases, the potential endings are a limited number – the cause/consequence relationship only has a restricted set of avenues to take. While the player contributes to the eventual emergence of a story by making the choices along the way, and, this way creating a narrative in particular directions, the parameters of the narrative web have been set out by a team of writers and designers. In the novel, there are no choices. While the author needs a reader to take on the second-person role – the 'you' to whom events happen – the 'you' has no power to influence the narrative. The reader follows the events of the plot as guided by the author. Despite agreeing to co-operate with the text, by accepting the offered role as the point-of-view characters, the reader's participation is not rewarded in concrete terms.

Due to the lack of true interactivity and true influence, participation in a second-person narrative remains illusionary. The reader/player fills a role, but that role is already predetermined. The reader/player remains outside the 'reality' of the fiction. The reader/player is not *there,* but instead '*as if* there'. The ekphrasis used to evoke mental visualization, by means of words, functions to create as vivid a simulation as possible, but it is fundamentally unable to actually transport the reader/player physically into the situation evoked. As in *Neuromancer* and in *Snow Crash*, the borders of the physical world

act as an important differentiator between the mundane and the virtual in *Halting State*. By now, though, AR technology and the beginnings of haptic technology envisioned in the novel are beginning to blur the borders further. Ironically, Elaine, who has no difficulty retaining clarity over the mundane and the virtual, is the one who plays in a haptically enabled virtual space. It is a full AR overlay over the mundane world, but because the action still takes place in the physical world, the physicality is translated through the computer-generated graphics: 'You drop out of haptic space and without your eyewear continually repainting him in armour, Mike reverts to his workaday appearance' (p. 22). Jack, on the other hand, to whom reality and the virtual blur, brings the virtual into the physical world through his pretense for a real family. He acts as though he has a family – 'Your sister is tweeting on the end of the line, oblivious, and you really need to get her off the phone fast' – but it all remains a 'scenario' (p. 32) although the deceptive use of the word does not immediately reveal the truth. For Jack, the undue mixing of the virtual and the fully interactive, physical mundane world is threatening to usurp his sense of reality in the Baudrillardian manner. As Elaine and Sue demonstrate, a simulation is unable take over reality as long as the simulation lacks full interactivity and full haptic feedback. Devoid of open interactivity and physical dimension, immersive fiction must rely on the ekphrastic techniques of stimulating psychological processes of memory and association in order to create an emotional response.

While the immersive second-person narrative only functions ekphrastically by inviting the reader to visualise him/herself as part of the narrative, following the principle of Classical ekphrasis, the examples analysed below fulfil the definition of ekphrasis coined by Heffernan as 'verbal representation of a visual representation'. As discussed in Chapter 2, verbal representations of fictional virtual worlds are notional on several levels: as artworks, they themselves are not real, i.e. they do not exist in our everyday world, nor are the landscapes and locations that they represent in graphic form real. When the reader is invited to form mental images of virtual worlds by means of their textual evocations, the reader must engage in a more demanding process of imagination than in a case of ekphrasis in which text represents an existing visual artwork. The suggestion put forward by Yacobi that readers employ mental models in the visualisation process only works as far as the reader of an ekphrasis concerning a virtual world already possesses mental models about virtual

worlds. *Halting State* relies on those mental models to a great extent, as it avoids detailed explanations and, instead, trusts the reader to understand intertextual and otherwise contemporary cultural references.

6.3 Sue: looking into a virtual world through a window of ekphrasis

The initial introduction to Avalon Four takes place through Sue's point of view (pp. 13–16) in a section that is framed by a whitespace at the beginning and another at the end. Stross uses whitespace liberally in the text, separating the narrative into self-contained, but closely connected segments. Whitespace functions in a way similar to panel borders in comics and graphic novels. It allows the reader to actualize from the text the events that are included in the text itself, but which must be logically present for the action to continue (McCloud 1994). Sue has been sent to the location of the crime to investigate, but the nature of the crime remains elusive to her. Eventually, the game company's CEO asks a video to be shown to her, as 'It's the only way to explain' (p. 13). The mention of the video introduces the reflecting device, as required by Ryan to contain the narrative in a virtual world. It is to be understood that the following passage takes place on the video, not in the mundane world of the narrative. The CEO's abandoning of verbal explanation in favour of the image seems to support the notion of 'a picture tells more than a thousand words' and thus it plays with the relationship between word and image. The text's awareness of word and image seems to be supported by the close of the ekphrastic passage, when one of the other employees asks Sue, 'Got the picture yet?' (p. 16). The implication of the figure of speech is verbal understanding based on the visual material.

The intervening passage evokes the landscape of the MMO, interspersed by brief unattributed lines of direct speech explaining and naming what Sue's point of view sees. The explanatory lines function in the manner of descriptive and informative notes at a gallery or a museum: they provide context to the visuals and regulate them, as Heffernan has noted. In effect, Sue, inexperienced in online games, sees what the company employees want her to see. Her seeing process, presented as 'your', the reader's, seeing process, moves from a sense of wonder to the practicality of witnessing the crime take place, as guided by the associated narration of the implied company employees. The passage begins

with a direct involvement of the reader in the immersive second-person, 'You're looking out', to create a quick and efficient sense of personal involvement. The object of the gaze is a fantastical landscape, evoked through powerful adjectives and active verbs. The rain forest canopy in front of 'your' eyes is 'verdant green', with mountain peaks 'a vulpine blue haze in the distance' and a waterfall 'half a kilometre high […] like 'molten green glass' and 'rainbow-clouded fragments'. The adjectives are enhanced with additional descriptors, with the green 'verdant' and 'molten' and the blue 'vulpine'. The spray and motion of the waterfall is not multi-coloured, but 'rainbow-clouded'. The landscape is evoked with figurative and descriptive movement. The forest canopy 'sprawls', the mountain peaks are 'biting at the smaller of the three moons that chase each other across the sky', while the waterfall 'shimmers and thunders […] shattering' into the fragments. Birds that are 'brilliantly plumed' 'soar and swoop across the treetops, occasionally diving'. As observed above, the 'supernaturally vivid' effect is noted as surpassing the grey reality in the viewer's attention.

The scene is made to lose some of its transparency, as the reflecting device is brought in to the evocation to remind the reader, as Sue, that despite its super-real quality, the landscape remains a representation. The 'camera on the rain forest pans back and up' although even the 'camera' remains a representation of the idea of a camera. There is no physical camera or a graphical representation of one, but the viewpoint of the virtual world changes. Because Sue is viewing a recording rather than directly participating in the virtual world, the change is not caused by her own viewpoint shifting. Rather, the text advises the reader, in Sue's guise, to interpret the change as the movement of a camera, a mental model adapted from the more familiar sphere of cinematography. As Sue, the reader's implied 'gaze' follows the opening up of the landscape further. Another paragraph evokes another part of the virtual world. An island in the sky is compared to 'a plug of rock set adrift from its mooring in the sea of reality'. Earlier, we were told that 'you're not on Earth anymore', but here the detachment from the familiar goes further. The sky island comes to function as a focus for the essence of the virtual, its separation from the physical reality. The island is compared to a painting by Roger Dean, a fantasy artist who favours the motif of the floating island. The reference to a painting by him 'come to life' immediately creates an

association with the traditionally suggested purpose of ekphrasis of bringing a still artwork to life.

The recorded scene acts more as a traditional artwork than the further examples below: while it includes movement, it depicts events that have already happened in the past and it provides no opportunity for interaction. Despite clearly being immersed in the scenery, Sue might as well be watching a film. Later on, Jack and Elaine enter the visuals and interact with them, but, for the moment, the text primes the reader by reminding him/her of the notion of paintings brought to life by means of cinema, 'moving pictures' and also, in parallel, of the power of the text to create mental impressions of life from still works of art.

The movement in the visuals being observed is expressed through further verbs of movements. These are provided partly by poetic details, which enhance the vividness of the scene. While the description of how 'The ground rises near the heart of the flying island, peaking at a low hill that is surmounted by the battlements and towers of a gigantic castle' is reasonably plain, it still involves several terms of movement: 'rises', 'flying', 'peaking' and 'surmounted'. The sentence is immediately followed by another, which enhances the described view through further evocative details: 'The battlements flash and glitter in the sunlight, as if they're made of a glassy substance: rainbows shimmer in their recesses.' The plainer, introductory sentence ensures that the reader has a clear idea of what the necessary visualisation involves. The more evocative follow-up sentence enhances the visualisation by providing extra details and similes to stimulate imagination. The rest of the sense of movement is created by the shifting point of view of the 'camera': 'the viewpoint rotates and zooms in on the island, diving towards the cobbled streets and crowded alleys that thread the city.' The movement of the 'camera' mimics the roving point of view that an avatar would ordinarily have:

> You weave past the heads of giants and around the sides of the palanquin […] loop around a timber-framed shop […] leap a foot-bridge across a canal, then slow as you enter a huge stone-flagged city square, and dive through the doorway.

In this instance, the point of view is outside the viewer's control. The illusion works on several levels: Sue is not in the virtual world, but it is *as if* she were there. The reader is not Sue, but it is *as if* he or she were. The virtual is not real, but it is *as if* it were. The long sentence of several clauses of varying length creates an impression of the illusionary movement through the virtual city, twisting and turning in the process of avoiding collisions.

To Sue, there is little of any practical point in being shown the scenes of the virtual world to such an extent. It is only after her illusionary viewpoint has traversed far through the virtual landscape that she is shown her primary interest, the robbery at the game's storage vaults. Logically, the company employees could have simply shown her the events at the 'bank'. Even there, ekphrasis functions to evoke the situation more emphatically, to create focus and tension. 'You' are faced with a set of doors 'three times as high as a tall man, carved giant ebony beams clasped in a grame of some silvery metal: The hinges they turn on are as thick as a body-builder's arms'. In narrative terms, the motif of the door means that something or someone is about to emerge. Hence, the doors are singled out in the passage and evoked in a manner to create an impression of height, strength, mystery and intimidation. The hinges are 'not silvery now' – a change in state indicates that something is amiss. Rather than simply noting that the door is kicked or blown in, the text builts up tension by gradually developing the situation through a succession of adjectives: '[T]hey're glowing dull red, then a bright, rosy pulse of heat lights them up from the outside, and the doors begin to collapse inwards on a wave of choking black smoke.' This sentence makes a certain interesting difference: up until now, all the terms indicating sensory input have involved solely the visual sense, apart from the verbs of moving. At this point, 'heat' and 'choking' imply tangible, physical sensations, but these are in no way possible, since, firstly, the action takes place in a non-haptic space, and, secondly, Sue is simply viewing a recording. The implied intensity of the event is such that words relating to the visual sense alone are no longer sufficient. Other senses need to be engaged for a fuller experience. Heat

can be felt on the skin, and choking smoke can be sensed in the throat and nose as taste and smell, as well as the uncomfortable physical sensation of not being able to breathe.

Despite the viewpoint passing through the city and through the 'bank' with a number of characters present, the auditory sense is not evoked until the bank robbers appear, and even then the references are brief: 'Their leader barks a sharp command' and a little later 'their leader barks another command'. Some of the customers 'give shouts of rage'. The lack of elaborating on the sound of voices, against the context of the rest of the carefully evoked environment, may imply that no sound carries through the recording and the auditory input is only inferred from the visuals. At the end of the scene, a dragon's fiery breath is implied, 'and the smell of napalm is just the same in Avalon Four as on any other silver screen'. Here, the game is, once more, directly compared to a more traditional visual art: in this case, cinema. The mention of the smell of napalm on a silver screen is ironic, as nothing can be smelled in a film. The reader is subtly reminded that the events are not real and that the world is not real, despite the distress of the company employees at the virtual theft. This introduction to Avalon Four also functions as an introduction to the technology and to the themes in the rest of the novel. With her down-to-earth, utilitarian mindset, Sue herself represents the segment of the population that uses the new technology for professional purposes, but has no particular emotional attachment to it. Viewed through her eyes, the recording, despite its illusive immersiveness, is likened to an entertaining, but ultimately unreal medium, which excludes the viewer from direct participation. The ekphrastic passage warns the reader that what appears real may not be and what may give an impression of direct involvement is only a product of an entertainment industry – exactly like the novel itself.

6.4 Elaine and Jack: ekphrasis as immersion in the virtual

Sue's encounter with Avalon Four, in its detached manner, heralds the strict separation of the three points of view in terms of presenting the virtual material. After viewing the recording, Sue's only dealings with the virtual involve her using the professional CopSpace AR programme to get information about records and crime scenes. She never logs on to Avalon Four or play any AR games. Her reaction to Avalon Four is to consider her son's request to get the game in a far more negative light. Jack's point of view emerges as opposite to hers. The passages that take place inside Avalon Four are always focalized through Jack. Although Elaine spends time in the game with him, her point of view does not receive a voice to express her experience of the virtual world, although her newcomer status could have been expected to provide a perspective of strong emotional engagement. *Halting State* follows the example of *Snow Crash* and *Neuromancer*, neither of which present the reaction of a newcomer to the virtual. Both Case and Hiro are old hands, although both end up encountering aspects of the virtual with which they are not familiar. This can be suggested as a difference from traditional literary ekphrasis involving static works of visual art. Although it is rarely said outright, the implication in poetry, in particular, is that the viewer-writer has seen the inspiring artwork for the first time. The fact that the chosen point of view in the texts under examination is experienced may indicate a certain lasting impressiveness of the virtual. Due to the changes and movement that the virtual constantly undergoes due to its nature, a user's specific experience of it is different each time, even though the base experience remains familiar.

Elaine's point of view acts as a balance between the extremes of Sue and Jack, regarding the relationship with the virtual. In the chapters focalized through Elaine, the text presents narrative AR environments, as opposed to Sue's wholly informative ones. They include her introduction as a historical swordfighter in a virtually altered guise, her reluctant playing of Spooks and the visit to the trade convention with Jack. The AR environments allow awareness of the real world even while the AR overlay is active. Throughout the novel, passages with strong AR presence tend to be fairly plain. In demonstrating Elaine's comfortable, casual relationship with the virtual, these passages provide contrast with the ekphrasis present in Jack's highly immersive experience inside the virtual world.

Elaine's hobby may be a gender-conscious response to Hiro's obsession with swordfighting in *Snow Crash.* Unlike Hiro – and, by extension, unlike Jack – who is at his most comfortable in the virtual world with no haptic interface, Elaine's combat art is realistic and physical. The starting situation displays ekphrastic elements. Her combat stance is evoked with a particular emphasis on the immersive second-person, using mentally stimulated cues for physicality:

> Your right foot is forward, knee slightly bent, and you can feel the gentle curve of the worn flagstone beneath the toes of the hand-stitched leather slipper you're wearing. Your right arm is raised, and your hand extended as if you are pointing a gun diagonally across your chest […]. With your left hand, you support your right, just as if you're holding a heavy pistol. […] the long sword […] weighs no more than a Colt Python, and it's balanced so that it feels like an extension of your fingertips. (p. 22)

By going through one limb after another, with attention paid to the exact posture, to the detail of the sensation of stone underfoot and to the weight of the sword, the text emphasises the hapticity of the situation. The experience is intensely physical, which becomes a significant feature when the text goes on to describe Elaine's opponent and then reveals that 'you don't see the biker jacket or DMs because, like your opponent, you're also wearing a full facial shield with head-up display, and it's editing him into a full suit of Milanese plate' (pp. 20-1). The space itself is physical, but the virtual overlay alters undesired features, without fundamentally changing the space or the situation itself. When Elaine delivers a strike on her opponent, the virtual overlay provides an enhanced effect of 'blood' gushing out of him. When the fight is over, both take off their headsets to reveal their mundane selves. The mundane visuals cause Elaine a moment of insecurity: 'And that's not so flattering, is it? Because you may not be overweight, but let's face it, dear, people mistake you for a librarian' (p. 22) As the point of view is through Elaine herself, the text has not provided a description of her looks, virtual or otherwise, beyond that in the swordfighting space she is 'a femme fatale with farthingales and a falchion'. Later on, when she becomes the object of Jack's gaze in Avalon Four, the text becomes more interested in her looks. In that situation, she is subject to Jack's advice and instructions. Here, with everything under her own control, she ends up in the more powerful role as the advising party to her opponent who requests professional help.

Elaine's point of view in an AR situation flows between the virtual and the mundane. After the description of her battle stance, the text shifts to describe Mike, her opponent, in his ordinary clothes, before moving to note how he looks like in the AR space. As the fight takes place, their conversation concerns matters outside the game. Elaine's emotional involvement with game space is far lesser than Jack's. Elaine is noted to have formerly been a roleplayer and a re-enactor in the physical world: 'I used to be into gaming, but I drifted sideways into historic re-enactment' (p. 45). Unlike Jack, Elaine appears to have mostly 'grown out' of such entertainments, with the exception of the game of Spooks – which, too, she is beginning to find dull. Like the swordfighting duels, Spooks has a very strong physical aspect to its gameplay in its interactions in the real world. All the description associated with the game is very plain, with nothing evocative emerging from the informative text: 'You pocket the bugging device, or whatever it is, key the co-ordinates into your specs, and let the overlay guide you along the pavement towards the target building' (p. 154). Ironically, Elaine's frustration with the game stems from the fact that it is too much like mundane life, until the plot twists to demonstrate that in fact, Spooks is a gamified network of citizen sleeper agents.

Jack's interaction with Elaine has echoes of the other two 'superprogrammes' examined in this thesis and their respective female 'sidekicks'. Like Case with Molly, and Hiro with Juanita, Jack, too, has a romantic relationship with Elaine. Like Molly and like Y.T., Elaine is far more rooted in the real world than in the virtual world, contrary to the programmer in question. Elaine's role in *Halting State* is to offer another channel through which the reader can receive guidance to the intricacies of the virtual in the novel. As we have seen, she, crucially, successfully maintains the separation between the real and the virtual, and provides the grounding necessary for Jack to willingly abandon his excessive immersion. When she appears, through Jack's eyes, as part of the virtual, she becomes an object of the active male programmer's gaze, for example, when he introduces her to Avalon Four and guides her through the avatar-building process. As will be demonstrated below, the dualism between the two characters follows the principles of male/female dynamism as put forward by Heffernan in his discussion about the principles of ekphrasis. Such a stereotypical

positioning is unfortunate, considering that in his blog, Stross often makes it clear that he is a vocal and passionate supporter of feminism and untypical female characters in literature.

The passage on pp. 97-103 is framed by dialogue, as is Sue's introductory passage. This time, the focus of the framing lines have shifted away from the concept of the picture to the concept of the game. Jack's unattributed question to Elaine, 'Are you game for it?', with its ironic turn of phrase, anticipates the passage. The question leads into a separating whitespace, followed by a dramatic introduction to the game itself: 'Limbo. In mythology, it used to be where the dead babies were stacked like cord-wood, awaiting a bureaucratic salvation. Limbo: the dusty front porch of hell. In Zone terminology, Limbo is the hat-check desk.' The repetition of the ominous word 'Limbo' three times creates a drum-like effect, each beat linked to an evocative, metaphorical or symbolic description. The language is strikingly different from the plain dialogue preceding the passage. The change immediately shifts the atmosphere.

The reader is reminded that the scene of 'Limbo' is not real, through the framing device and through specialised terminology. In the dialogue leading towards the ekphrastic passage, Jack suggests that they use Elaine's expenses account for 'a taxi out to PC WORLD and a pair of high-end gaming boxes'. Despite the fact that no explicit connection is made between the computers and the subsequent passage, the text expects the reader to make the implicit connection of the immersive gaming experience being dependent on the presence of the technology. Further, the lines about Limbo are followed by game jargon: 'You've configured yourself for spatial proximity, so you step into reality next to the unformed noob.' 'Reality' in this case is highly ironic, as the virtual space is anything but real, but the choice of word may also reflect Jack's attitude to the game world in general. As the introductory passage through Sue's point of view foreshadows, Jack finds gaming more real than reality itself. The term is repeated further down, as Jack glances at Elaine in their mundane world. She is noted as being wholly immersed and focused on the game, 'her glasses shutting out anything that isn't part of the reality in front of her'. To Jack, reality is a relative matter. Its borders are shaped like the gaming glasses the two players are wearing to experience the game. While other characters find reality outside those borders, Jack finds it inside them.

In contrast to Sue's lack of participation in the fantastical virtual landscape, the next few paragraphs establish the scope of interaction for the users present within the game. While in Sue's experience of the recording only a hint of senses other than the visual was evident, here, dialogue immediately demonstrates the availability of the auditory sense: 'Can you hear me? ' 'Yes. You mean through my headset?' The sensory input is controllable; Elaine is 'fiddling with her senses' to better fit in with the environment, but her direct kinetic sense is off-kilter, so she ends up 'slamming face-first into a pillar'. Her 'Ouch!' implies a level of tangibility, but the virtual nature of her environment makes it unlikely for her to have experienced the collision physically.

The following section of the passage describes Elaine configuring her graphical avatar under Jack's supervision. Jack's point of view goes through one judgement after another. He is positioned in the role of the gazer, while Elaine, in her avatar, ends up in the role of the object of the gaze and of the subsequent judgement. At first, Jack is impatient with her meticulousness, then he reluctantly admits that her choice of medusa hair looks good. When Elaine herself subjects her avatar to Jack's assessment – 'How does this look?' – he simply gives a vaguely positive answer, while qualifying it in his head: 'What Elaine has come up with is a passable attempt at an anime medusa'. Part of Jack's role as the guide/supervisor is to equip Elaine's avatar with appropriate virtual equipment and to give her general advice on the game. At first glance, and certainly from his own point of view, Jack assumes a position familiar from Heffernan's interpretation of ekphrasis. He acts as the male viewer gazing on the female described and reviewed in visual terms. Her 'asp-headed dreadlocks are very cool' and her 'passable' avatar has 'brightly textured skin like vinyl, big brilliant eyes, and colourful clothing'. The voice in the passage is his; with only the occasional dialogue from Elaine as lines that tend to be questions or acceptance of Jack's judgement. In addition to her visuality, she seems largely silent, depending on Jack's opinions and advice. In terms of Lessing and the tradition established by him, she wears the role of the silent, visual female, in contrast to Jack's voice and activity. Moreover, as Heffernan's interpretation of the gendered dynamic would have it, Jack literally enlivens the picture. It is his suggestion and his guidance that has brought Elaine into the game; he has enabled the moving picture that is her avatar, which is now responding to his direction.

Despite the apparent roles of the gazer and the object, there are subtler influences under the surface. Jack is not a reliable narrator. As the rest of the narrative shows, Elaine is not simply Jack's creature. As a character who comfortably exists on the borders of the virtual and the real, her influence pulls Jack more firmly into the real world from his imaginary life. In this instance, Jack's admiration for her fulfils the mutual power dynamic in Heffernan's notion of the viewer and the picture. Even as he seemingly exercises power over her, she holds a power over him by her image-like captivating qualities. Elaine's fantastical avatar is in great contrast with her everyday appearance, although even the avatar does not conform to the stereotypical image of a scantily clad woman in a fantasy world. Furthermore, it becomes evident that while the avatar's appearance is a factor in Elaine's attractiveness, it is, in fact, her quick learning that impresses Jack. Scattered amidst the references to her looks and her questions are veiled indications of approvals based on skill. She may have spent a long time working on the avatar, but her skill has created a good avatar for a newcomer. She figures out functions without Jack's advice: 'The noob turns to look at you, and, to your surprise, raises an eyebrow: obviously she's been exploring the somatics while your mind was wandering.' Her enjoyment of the game comes to Jack as further surprise: 'She's either being very patient or she's actually enjoying the novelty of it all.' Considering Jack's own penchant for games, perhaps her immersed state as 'focussed completely […] *Totally* intent' appeals to Jack most of all.

When Jack leads Elaine out of the newcomer area to the game proper, to a location overlooking a continent called Hell, the text shifts from dealing with the relationship between word and image, and the gazer and the object, to evoking the landscape they see. Little reaction from Elaine is offered. Jack is distracted from her, faced with the landscape, related in five paragraphs of powerful ekphrasis (pp. 99-100).

> Hell lies outside the universe, and is thus largely exempt from the laws of physics. Its geometry is a Dantesque parody, for while the Nether Sea is flat, the entirety of the continent lies below sea-level, a vast trumpet bell some thousands of leagues wide stretched out across the knife-sharp line where the sea meets the swirling vacuity that forever hides this realm from Heaven.

The first paragraph establishes the rationale for the subsequent ekphrasis. The continent is not part of the normal universe – not in the game, and doubly so, as it belongs to the virtual dimension and not to the real world. The second sentence, which is very long and forms most of the paragraph on its own, reflects the extent of the continent and the sweep of the gaze necessary to trace it. Dante, the first of the intertextual references employed by the ekphrasis, introduces the abyss borrowed directly from *The Divine Comedy*. The description of the impossible geography is enhanced with comparisons to a trumpet bell and a knife's edge.

The four questions that make up the next two paragraphs represent Jack's – 'your' – near-sublime experience of the artistry of the virtual landscape:

> How do you describe a continent of paint that has been hollowed out into a frozen whirlpool, forever held below the cliffs of roaring, glass-green waves that somehow flail at the abyss, without ever curling over and toppling over to inundate the red-glowing wilderness? How do you describe the turbulent flocks of the venal, swirling like starlings in the autumn air above the muddy fields of the Somme? How to picture the power-pylon ranks of impaled, damned souls marching in synchrony across the deserts of the fourth circle? The searing black-iron skyscrapers of Dis, windows glowing with diabolical light?

These questions express the inability of words to represent a powerful visual. Ironically, the sentences answer their own questions. The representations that follow the initial questions of *how* are composed of the similes of 'glass-green', 'swirling like starlings in the autumn air above the muddy fields of the Somme', 'power-pylon ranks of impaled, damned souls', enhanced adjectives of 'red-glowing' and 'searing black-iron' and terms of strong motion such as 'roaring', 'flail', 'curling over and toppling over to inundate', 'turbulent', 'swirling' and 'marching'. The reference to the notorious First World War battle of the Somme as well as the dark, gloomy vocabulary throughout the passage – 'hollowed', 'roaring', 'abyss', 'inundate', 'red-glowing wilderness', 'turbulent', 'impaled, damned souls', 'deserts', 'searing black-iron' and 'diabolical' – suggest awe mixed with fear. A sense of movement penetrates the passage, but it is notable that aside from 'roaring', which implies hearing, the words chosen for this passage are only related to the visual sense.

The second-person address here is to be understood as the general, colloquial 'you', but the questions also function as the invisible narrator's challenges to the participatory reader. The

reader does not see what he/she, as Jack, is meant to describe. The reader's only opportunity to see the view is to mentally visualise it based on the verbal representation. A cycle of representation-visualisation-representation appears, but to use a term borrowed from computer science, that cycle becomes an infinite loop, an error based on the circularity of imperfect code which means that the intended function cannot be executed. The proposed struggle between verbal and visual representation is stuck in that loop and cannot be resolved. By containing the desired description in themselves, the questions demonstrate the challenges of ekphrasis, particularly in the case of notional visuals. For the writer, the visualisation of the imaginary landscape must come first, before the writer can attempt to transfer it to the reader. The reader is wholly dependent on the writer's words to form the visualisation. That is why the invisible narrator's questions to 'you', the participatory reader, are, in a sense, impossible – 'you' do not describe these things until you have been told enough to visualise the scene.

After being presented the impossible questions, the reader is offered comparative help, with references to both art and science:

> It's like something out of Hieronymus Bosch, of course. Bosch, as pastiched by a million expert systems executing code that procedurally clones and extrapolates a work of art across a cosmic canvas. Procedural Bosch, painting madly and at infinite speed to fill in the gaps in a virtual world, guarded by the titanic archangels of Alonzo Church and Alan Turing, spinning the endless tape…
> It's funny how it takes game space to bring out the poet in you. And it's even funnier how you're embarrassed about letting it show.

The name Bosch refers to the 15th-16th century Dutch painter's well-known images of fantastical dark wastelands of torments. The mention of Bosch supports the reader's mental visualisation and gives it direction, in the manner of the mental models in ekphrasis as theorised by Yacobi, provided that the reader has the knowledge of Bosch's works. His imagery of vast imaginary vistas filled with small representations of human figures is reminiscent of modern MMOs with their large landscapes populated with small player avatars. Stross has extrapolated from Bosch's works into a poetic image of Bosch as a creative 'god' of sorts in a virtual world. The reference to the mathematicians Alonzo Church and Alan Turing, along with Bosch, brings together the worlds of art and science. The idea of the universe as a hypercomputer, formulated according to the so-called (and

controversial) Church-Turing thesis (Copeland 2008), is given a form in the notion of Bosch's paintings come to life in a virtual world. Jack's point of view, inspired by the virtual landscape, briefly imagines the virtual world as a mini-universe. This notion of art and science coming together to form a powerful creative force in the virtual dimension is in accordance with Lévy's suggestion of the virtual operating in a creative cycle between its own potential and the actualisation of that potential in the real world. In this case, the virtual world creates further potential from the actual works of Bosch, Church and Turing, in a process of imagination.

The reflection that follows – 'funny how it takes game space to bring out the poet in you' – is crucial to the rationale of virtual ekphrasis. In the case of traditional literary ekphrasis, the verbal representation is stimulated into being through the process of inspiration by a visual representation. Here, the visual occupies a border-like position. On the one hand, Jack is present in the virtual world, in the 'game space', but, on the other hand, his inspiration stems from a landscape he is viewing over (virtual) 'distance'. Jack himself sees his position in a space and his 'undescribable' features of the landscape are features of a space. Similarly to traditional ekphrasis, in this case the verbal expression of wonder and awe in Jack's point of view is inspired by his gazing, but, here, the object of the gazing is a virtual space. The inspiration to verbal representation springs from the presence within a visual representation.

It is specifically the spatial aspect of the visual environment that continues to elicit wonder in Jack, as he and Elaine 'teleport' themselves from Limbo 'down to Earth', the normal play area of Avalon Four. The expression is again very ironic, as the game environment and Jack's attitude to it are very much the opposite of 'down to Earth'. Indeed, the world itself is not 'Earth' – the two arrive at 'Vhrana [...] the capital city of Cordua, in northern Breasil on the continent of Mu'. During the process of moving from one place to another inside the game world, 'The sky turns deep blue, the world freezes, and a progress bar marches slowly across it from horizon to horizon'. The transparency of the virtual world disappears, as the movement stops and the progress bar comes into view, presumably relating to the download of the new area. The sublimity of the virtual environment reaches new levels in

Jack's mind. As his 'reality' is being updated by 'Ethereal runes written in aurorae six hundred kilometres high' in the virtual sky, 'your skin crawls with superstitious dread':

> *Someday we're all going to get brain implants and experience this directly. Someday* everyone *is going to live their lives out in places like this, vacant bodies tended by machines of loving grace while their minds go on before us into strange spaces where the meat cannot follow.*

'The meat' is a reference to Gibson's works and to other tales in which the body is considered inferior to the mind in the digital context. *The Matrix*-like scenario in which bodies are cocooned while minds experience illusionary worlds created by technology renders the body even lesser: unnecessary and practically disposable, while the virtual would become the new reality, as Baudrillard has warned and as Jack's point of view already describes his game world. The prospect is evoked in tense, ominous tones, using metaphors of anxiety and fear:

> You can see it coming, slamming towards you out of the future, like the empty white static that is all anyone has ever heard from beyond the stars: a Final Solution to the human condition, an answer to the Fermi paradox, lights on at home and all the windows tightly shuttered.

The mention of the Fermi paradox refers to the question posed by the physicist Enrico Fermi on the lack of contact with extraterrestrial civilisations, in the face of the considerable probability for their existence. By invoking the prospect that the development of virtual technology might lead to the ultimate turning inward, in which state life is lived inside the mind, with external stimuli ignored, the text associates a global, even a cosmic loneliness with that of Jack's own. Jack suffers from loneliness and insecurity throughout the novel. As we discover at the end, his setting up of the virtual family was a direct result of his mother's death and him being left on his own. Even his chosen form of escapism, gaming, is unlikely to provide lasting relief, as we see here. A concept familiar in studies of MMOs is each player being 'alone together': any given player is playing '*surrounded by* others, instead of playing *with* them' (Ducheneaut, Yee, Nickell and Moore 2006: 4). Despite the apparent company, each player is focused on their own personal game. While Jack's point of view is not vocalizing it directly, it seems that he is creating a vast, cosmic loneliness out of his own feelings, as a poetic result of experiencing the environment

central to that feeling. Jack's reaction to a feeling of loneliness is, as ever, to turn it positive in a game context: 'Because it's a thing of beauty, the ability to spin the cloth of reality, and you're a sucker for it: isn't story-telling what being human is all *about*?' As we have seen, Jack applies the term 'reality' to the virtual world. The ability to invent your own reality is, to Jack, a particularly effective form of storytelling. As discussed above, Jack is challenged in describing the powerful visuals in words. Further, he is unwilling to 'show' that he is inspired to using poetic language. He expresses a clear preference for the visual over the verbal and the ability to experience the visual directly by being present within it.

The rest of the passage describes the city of Vhrana in fairly plain terms, generally avoiding the features typical of more vivid ekphrastic text as considered above. The tone is more recognisable from a travel guide than from evocative fiction earlier in the passage:

> Enterprising adventurers have quarried out vast cellars beneath their picturesque guild-houses, and for a pittance you can descend through the endless passages until you come to a wicker platform overlooking the jungle. Then you can rent a bamboo-and-silk hang-glider and descend to the surface

This area is no longer the supernatural landscape that so awed Jack; the matter-of-fact tone brings the text, together with the characters, 'down to earth' of sorts, which to Jack appears as 'reality'. As the situation normalises, the text returns to dialogue between Jack and Elaine.

Two other passages set in virtual space merit brief comparison and contrasting. Neither presents the same kind of extended poetic reflection. In terms of narrative and chronology, these passages take place after Jack's introduction of Elaine to Avalon Four, which is also the first time when the reader encounters the immersive and interactive space outside of a recording. Sue's viewing of the recording functions as a narrative foreshadowing: a significant motif is presented to the reader 'safely' from a narrative distance. Sue is unable to interact with the virtual world, but she is able to receive explanation on what it is and what it does. Equipped with that information and anticipation, the reader then 'enters' the virtual world, nominally as Jack's point of view, but with the focus of the gaze on Elaine, who is experiencing the space for the first time. Jack's ekphrastic wonder demands the reader to actively, vividly visualise a complex set of images in the artificial space and to

contemplate their wider implications. Even as the ekphrasis marks Jack's sublime joy in the experience of the virtual, it also marks a certain border that has been crossed. With that border now crossed, with the virtual and its potential implications fully introduced, the text is able to deal with the virtual in more casual terms.

Another point in the text indicates its own awareness of the difference in the experience of the sublimity of the virtual and its more casual side: 'Not that you're much given to probing the time-travelling condition when you can go rushing around bashing goblin brains […] a bit of mindless recreational hack'n'slash to distract yourself' (p. 129). Jack has retreated to the game as the real-world troubles have grown too much – or so the reader thinks at this point: 'The panicky urge to phone Sophie is sudden and nearly irresistible – but then, what if you're wrong? You don't want to tear holes in the Potemkin village of her reality. So you decide to play games instead' (p. 128). The irony of the sentences is, of course, that Sophie, Jack's 'sister' is only another game character as well, and, in that sense, she has no reality.

From the previous passage considered above, we know that Jack is inclined for poetic reflection, inspired by the virtual space. In this case, he has the purpose of keeping himself from thinking and he is engaging in a playing style known as a 'dungeon run': a contained area within the overall game, which the player typically plays through in order to gather treasure and experience points, rather than for reasons of the game's overall story or for the player's own creativity. '[T]he automatic scenario generators […] got all the subtlety of a play-by-numbers adventure book or a Hollywood motion picture' (p. 130). Instead of the evocative description of Hell, the text gives a list of what Jack expects to see in the area – 'underground rivers, vast and wide, and huge cavernous killing zones with mist-wreathed stalagmite islands and waterfalls thundering into the subterranean depths – and stepping-stones and brokeback bridges to traverse under fire from the chittering hordes' (p. 129). A few paragraphs down, Jack's point of view appreciates 'the art-work' with its music score and the realistic design of the stone ground.

Unexpectedly, as Jack is keeping himself from thinking too much, he also seems to keep himself from being properly immersed in the virtual environment. Instead of treating it as a 'real', affective space, as he did with Elaine, he now sees it as an artificial space. Even as

the situation evolves into a battle, Jack's point of view remains aware of out-of-game details, such as an ally's voice coming through a particular piece of equipment and the opponents' use of equipment taken from another game entirely. The text seems to support Ryan's notion that immersion requires conscious effort and complex mental processes. In contrast, passivity means that the artificial environment is not translated into an 'as-though-real' one through the process of imagination.

On another occasion, Jack and Elaine are attending an in-game business meeting with one of the gaming company employees. The characters are referred to by their game avatar names – Stheno and Venkmann, rather than Elaine and Russell, which, logically, should increase Jack's sense of immersion and increase the amount of ekphrasis. However, their dialogue concerns the mechanics of the robbery, from technical perspective, a topic which is in direct contrast with the players' current situation. The transparency of the virtual world is brought to a minimum. '[T]here's a bug in Kensu's shitty Chinese code. I might be a memory leak […] or maybe something more exotic, but someone figured out a privilege-escalation attack that works. […] The question is, who got root?' (p. 137). In a sense, the conversation is turning the immersive visual environment inside out. The attention of the characters and the reader alike is drawn to the building blocks, the code, the form of writing that regulates the visuals and other sensory input of a virtual world. 'Bringing up the in-game debugger in your field of view shows a whole bunch of scripting cruft attached to the torture implement' (p. 138). Any suspension of disbelief is impossible in such circumstances. It is only when the situation becomes unexpected that more evocative elements are brought in to the text. As the avatars are attacked, they must react to the situation as though it were real. Transparency is increased and the references to the world outside the game decrease.

6.5 Ekphrasis in *Halting State:* immersion

In *Halting State*, ekphrasis denotes immersion. It functions on several levels, from the immersive second-person narrative to the evocations of the virtual world as experienced by the characters. As the reader is invited in to suspend disbelief and become part of the story, similarly, the characters must suspend disbelief, to various extents, as they encounter the virtual. The text is dependent on its historical context in order to be able to play with the ludic second-person narrative. The metaleptic layers create a textual 'computer game', which, at once, pays homage to the online text adventures of the late 1970s and early 1980s and acknowledges the graphical games of today. In order to gain the most fulfilment from the text, the reader is expected to have the sufficient background to understand the various game- and online culture-related references. As familiarity increases immersion, it also makes ekphrasis more efficient.

The text emphasises the fact that immersion is a psychological, emotional process. By presenting several different avenues for immersion – the novel, the film, the game, re-enacting and virtual worlds – it shows that immersion is not bound to the medium in which it is presented. Sue is momentarily drawn into the recording of the virtual world, but she refuses full immersion by comparing the experience to a tourism advertisement or a film, motifs within her own personal frame of reference. At the other extreme, Jack embraces immersion on all levels, not only in Avalon Four but also in his life, which he has shaped to an escapist fiction. Jack's illusionary 'family' also demonstrates that the kind of immersion to which Bolter and others have objected is not necessarily intrinsically bound to fantasy and science fiction. Jack's loss of sense of what is real and what is a game is centred on motifs that are extremely realistic: family and everyday communication. Between the two extremes, Elaine finds an immersion of sorts in her virtually augmented re-enactment, which is still bound to the real world by means of the sense of touch.

Conclusion: A proposal for virtual ekphrasis

In the two decades since W. J. T. Mitchell proposed the 'pictorial turn' in the Humanities, the development of and the various forms of the visual has intensified further. Its spread through the digital media has been so rapid that relevant critical theory has found itself challenged to keep up. At the same time, not only viewers, but users and readers alike have had to get accustomed to 'reading' – interpreting and experiencing – those new forms of visual art. That process has not been straightforward, as evidenced by commentary by scholars such as Bolter concerning the prospect of 'lazy' and 'uncritical' art experiences in the face of the immersive virtual. This thesis has striven to show that the suggestion of an immersive (visual) experience automatically rendering the user's critical faculties unusable has its basis in the near-hostile relationship that the Western literary tradition has had with the image. An immersive visual, such as a virtual world, is still a recent enough invention to appear troubling to theorists, who, after a long period of warnings from authorities such as Mitchell, Krieger and Baudrillard, see the bringing together of word and image as a potential start for the shattering of the concept of representation itself. Whereas 'immersion' is assumed to stand for uncontrolled emotion and control over the viewer/experiencer by the image (presented or conveyed), its opposite, distance, specifically *critical distance*, suggests rationality and control over the image by the viewer/experiencer. The traditional literary view holds that the fascinating image presents a danger, in which the viewer may lose him/(her)self. An immersive visual magnifies that danger to a great extent.

Instead, this thesis has taken the opposite view has approached the concept of the immersive visual from the perspective of scholars who link immersion with the complex processes of imagination, co-operative creation between the visual and the viewer/experiencer, and the actualization of reading/experiencing a story in the mind as much on paper as on screen. Imagination becomes an essential part of the fulfillment of the narrative experience, but imagination needs to be set in motion by a combination of the writer's/speaker's language and the viewer's/experiencer's/reader's own personal knowledge and experiences. Reader-response theory, as put forward by Iser and Ingarden, which concerns the role of the reader in the experience of a written story, is here complemented by rhetorical ekphrasis, which provides guidelines for the kind of evocative language that

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allows for easier actualization of the implied visual by the reader. The admission of the viewer/experiencer/reader into the creative process, in a key role, means that the prospect of immersion becomes considerably less objectionable. As the aim of the rhetorical ekphrasis is to create a sensation of simulated personal participation in the situation described, an immersive visual, equally, includes the viewer/experiencer in itself as an essential part of the experience. Consequently, the immersive visual can be appropriately represented using the techniques from rhetorical ekphrasis, such as the inclusion of movement and change, which do not easily lend themselves to art ekphrasis.

This thesis proposes to define 'ekphrasis' in general as an 'evocative verbal rendering of a significant visual', while being mindful of the implications of rhetorical ekphrasis concerning psychology and sensory input as well. This definition is not perfect, because this thesis has discussed multisensory experiences in terms of virtual worlds and situations such as festivals in rhetorical ekphrasis. Yet, while it is indebted to Heffernan's definition of art ekphrasis, it seeks to incorporate important aspects not explicit in Heffernan's proposal, such as the (emotional) significance and the essentiality of the evocative language. The dominance of visual art in ekphrastic texts is understandable, because art is always imbued with significance through emotion and symbolism in its entire process of creation and display. The element of *enargeia* in any kind of ekphrasis, i.e. the purpose of the words to create a vivid illusion of the visual evoked, is a concept very closely connected to immersion. Indirect immersion takes place when the co-operation between the techniques and vocabulary of the language, and the willing participation of the reader/listener is successful. Thus, we can establish that immersion is, in fact, an essential element of any ekphrastic text, rather than a suspect feature to be avoided.

Research answers: principles of virtual ekphrasis

We can condense the most important features of virtual ekphrasis into five identifiable, although interrelated, principles, which also answer the research questions posed in Introduction. The answer to the first research question, whether virtual ekphrasis can be said to exist at all, has been shown to be 'yes'. All three texts discussed above represent, by means of words, notional computer-generated visuals and the resulting human responses to

them, i.e. human experiences in the virtual worlds. The human responses are an essential part of the representation, because, as in the case of any ekphrasis, the human emotional response is the key factor in the production and reception of ekphrasis. The digital visuals represent the concepts and ideas they depict, such as geometry, natural features, physical buildings, fantastic creatures and other users. Further, they also represent the code that lies at the heart of the representation. The visuals themselves do not equate the physical concepts they represent, nor, in precise terms, the code, because the code has been 'translated' in order to turn it understandable and appealing to human users. The human experience in a virtual world is thus directly immersive.

When this experience is represented in words, the ekphrasis involved produces indirect immersion. In this case, the definition proposed above also runs into difficulty, because if we verbally represent the visual alone, a great deal of the artificial environment, which is an instance of multisensory 'total art', as Ryan puts it, is left unrepresented. Therefore, this thesis suggests that the ekphrasis of digital graphics, 'digital' ekphrasis, should be defined as 'verbal representation of a digital experience'. If we are specifically concerned with virtual worlds, as in this thesis, we may, of course, replace the term 'digital' in the definition with the term 'virtual'. This fluidity makes the definition proposed less substantial than, in ideal circumstances, it ought to be, but this thesis has demonstrated that the vocabulary of the digital is still very much in development.

Our second research question enquired what happens to ekphrasis when it incorporates spatial elements. As Westphal has noted in his discussion on the meaning of space, a full experience of a space requires the use of all available senses, although the visual sense is known to have a dominant position in how humans perceive their environments. Ryan has observed that any immersive text needs to create a space to which the reader can relate and populate it with individuated objects. The reader unconsciously applies his/her 'horizons of expectation' in order to make sense of a text but it is the unexpected that adds fascination and excitement to the text. The reader perceives at least three spatial layers in virtual ekphrasis: the broader literary space consisting of intertextual factors such as personal expectations and genre conventions, the physical, mundane setting of the text, and the non-physical, virtual, setting of the text, the locus of virtual ekphrasis. The geocritical principles

of intertextuality, multifocalization, stratigraphy and polysensoriality can be adopted to help formulate concepts of literary space and how it can be read differently by each individual reader, based on that reader's own background, as suggested by reader-response theory and rhetorical ekphrasis. Specifically, we can say that the approach of geocriticism assists us in reading the significance that is attached to virtual space, and which is a key factor in producing related ekphrasis through the process of triggering an emotional human response as a result of that significance. The mundane and the virtual spaces in the text form a space and an anti-space. They function in an interdependent relationship, defining each other in the overall setting, but they can also easily stand in apparent opposition against one another, as we have seen in the repeating theme of the conflict between the physical and the virtual. Even as ekphrasis represents a state of the viewer-user becoming a part of digital visual and closing the critical distance, it still retains a cautionary tone against the prospect of the user forgetting the division between the physical and the virtual. Therefore, as virtual ekphrasis represents illusionary space, it needs to deal with the paradox of increasing and decreasing immersion at once. It incorporates representations of movement, audio, perhaps smells or haptic sensations where available, but it must also deliver the indication that the space is artificial.

When a text represents a virtual world, it is not representing a physical artwork such as a painting or a sculpture. We can certainly say that a painting consists of paint and a sculpture of stone or metal, but in their cases the medium is directly visible and unchanging. A virtual world consists of code, but if we only viewed code, it would seem meaningless to (most of) us and it would not provide the same kind of 'meaningful' experience as a 'translated' code in graphics and sound files does. Yet, that code contains the entire multisensory environment. The virtual world represents the code, as much as it represents a notional fantastic world with all its details. We can borrow the fundamental term from *Snow Crash* to express the first principle of virtual ekphrasis: it functions on the concept of *metaphor*. The metaphor communicates a notion in a manner that is more understandable to the user that the notion in itself. Further, the metaphor encompasses the notion of immersion by creating an impression of a willing suspension of the knowledge of the actual state of matters and choosing to replace that state with another state. A user knows that the virtual world is not real, but he or she chooses to act as though it were.

A virtual world differs from traditional artwork in a number of ways. It involves movement, intimate immersion of the viewer-user in itself rather than keeping him/her at a distance, and subsequent direct interaction by the viewer-user with it. The third research question concerns the potential new dynamic between the viewer and the image. This thesis has emphasized the notion that the viewer-user must make a conscious decision and effort to accept the immersion offered in the direct immersion of a virtual world or in the indirect immersion of virtual ekphrasis. As seen in the three texts examined in this thesis, the modern 'archetype' of the superprogrammer readily accepts this offer, whereas his female associates treat it with moderation or suspicion. Excessive acceptance of immersion leads to addictive behaviour and loss of critical thinking: the kind of qualities that immersion in general is accused of. Such behaviour is depicted in the three texts as a loss of the equilibrium between the image and the viewer-user and as granting of control of the situation to the image. This kind of situation is represented as unhealthy, and the superprogammer protagonist must gain control again over the image with the help of words, by using code in a skillful and inventive manner. Thus, ultimately, the texts suggest that words, as language, and as code, can dominate even over the digital image. Code, of course, is not purely language, and its dominating position may result from the fact that it contains both word and image in itself, in a forced co-operation between the two.

The dynamic of a gendered struggle in ekphrasis between word and image, and the image and the viewer, as suggested by Heffernan, ends up in a peculiarly ambiguous position. On the one hand, this thesis has shown that the notion itself has very little basis. Studies on ekphrasis have simply not considered ekphrastic texts by female or homo/bisexual writers. Hence, Heffernan's suggestion is misguided in its exclusivity. On the other hand, it is observable that the truism of the 'appropriate' male and female roles in the Western tradition keeps being repeated in creative works. In all the three texts examined in this thesis, the active protagonist is male, who, despite his personal and social shortcomings, emerges victorious at the end because of his own creativity. The supporting roles are reserved to females, who tend to be far more interested in the mundane world than in the virtual, but who, at the same time, are not individually dependent on the respective protagonists for their safely, despite the latter's greater expertise.

In their own ways, Molly, Y.T., Juanita, Sue, and Elaine are all strong female characters with their own agendas, preferences and actions, but it is also very striking that all of them are excluded from the active virtual experience. All of them prefer the physical, mundane world over the virtual, even Juanita, who is a world-famous programmer and one of the creators of the Metaverse. When Elaine accompanies Jack to Avalon Four, we do not hear her voice; despite her quick learning and evident interest, she becomes part of the virtual world and subject to Jack's gaze. Molly is not particularly interested in cyberspace, neither is Sue, and Y.T. feels uncomfortable when faced with the highly developed skill of Ng. We are not told whether the sublime bliss that Case and Jack feel as they enter their respective virtual worlds, or the easy contentment of Hiro, are, or could be available, to females. The only female who is directly linked to the virtual in an endogenous or allogenous perspective is the ghostly Linda, who is not fully (it is implied) an autonomous entity, more of a puppet of the AI. She functions as the temptation in Case's illusionary paradise. Her actual role is to remind him of the significance of the physical through its absence.

There are indications that the virtual is related with the heterosexual aspect of the female, in Molly's 'gatekeeping' act of intercourse with Case prior to his return to the cyberspace, in the orgasmic vocabulary during his return, and in the rather naive erotic associations that Hiro has observed in the lense of his computer. Yet, the overall impression does not place the passive female under the various forms of male activity in the encounter with the digital. Juanita defeats the power of the gaze by wearing a black-and-white avatar, thereby disturbing the aesthetic hierarchy of the Metaverse. Elaine's quick learning surprises Jack, who has attempted to judge her based on the appearance of her virtual avatar. Rather than attempting to create a (hetero)sexualized connection between the male superprogrammer protagonists and the virtual, it seems more accurate to observe that the females are incidental in relation to the virtual. Their role is to warn the males against excessive cooperation with the virtual and subsequent loss of control. The virtual appears as a male playground, rather than as a feminised object.

Of course, the above view on the gendered dynamic is as restrictive as that proposed by Heffernan, due to the restricted sample. A fuller picture, as with ekphrasis as a broader

concept, ought to follow the geocritical principle of multifocalization and examine texts by female authors, non-heterosexual authors, and relevant texts with depictions of female and non-heterosexual protagonists or other important characters. It bears noting that by far most of fiction that deals with virtual space to any large degree only features standard male heterosexual protagonists. This is, undoubtedly, partly due to genre expectations from the part of the authors, who anticipate a particular readership with a specific familiarity horizon.

Despite the limited role of the female characters, their association with the physical, in opposition to the virtual, focuses our analysis on the second principle of virtual ekphrasis: *separation*. This principle operates on several levels. An essential aspect of virtual ekphrasis is the reader's ability to distinguish the virtual from the mundane. The adapted methodology proposed by Ryan and outlined in Chapter 2 is helpful. The text must make it clear, either by stating it outright or by the use of sufficient inference, by means of vocabulary, switches of perspective, whitespace, or similar devices, that the scene has switched from the mundane to the virtual world. Typically, at least when the virtual world is introduced in the text, a reference is also made to the reflecting device, i.e. in this case, the computer equipment. All three texts discussed here refer to such equipment in different terms: deck, computer, box, goggles, dermatrodes. Active verbs denoting the shift function as 'short-cuts' to the reflecting devices: when Case 'jacks in' or 'jacks out' the reader understands what is happening, because the verb is specific to the context. A portion of the narrative takes place within the reflecting device, but it is understood to be temporary and terminatable, at which point the scene shifts back to the mundane world.

The principle of separation directly relates to the concept of representation, as a difference is drawn between that which is represented (and either exists in the physical world or is notional to begin with) and that which represents (which may, of course, also exist or be notional). Because of the immersive and interactive nature of digital graphics, specifically as virtual worlds, that separation needs to be addressed with greater emphasis. As we see in the example of Sue viewing Avalon Four for the first time, in *Halting State,* if the factor of believability is high and the nature of the representation is not made clear, it leads to confusion. All three texts stress the importance of separation between the virtual and the

physical. In *Neuromancer,* Case is made uncomfortable by the boundary crossing virtual recording of McCoy Pauley and by the power of the AIs in the physical world. The fully representational simulations, with simulated physicality, cause primal reactions in him in the form of aggression and fear. The conflict is resolved when he chooses the physical over the virtual. In *Snow Crash*, the main conflict is caused by the virus, which functions both in the virtual and also in the physical world. It is in direct contrast to the rules of the Metaverse, which forbid simulated attempts at physical interaction in order to refrain from breaking the illusion of another world. In *Halting State*, the underlying factor under the primary conflict is Jack's inability, and unwillingness, to separate the physical world from the virtual, whether as the AR game of the simulated family, or as his eagerness to escape his constant anxiety into Avalon Four. In all three texts, it is the blurring of the borders between the virtual and the physical that causes distress to the characters.

The discomfort at the reduced separation of the virtual and the mundane is only one example of the constant linking of emotions with the virtual experience. It is the difference between the mundane and the virtual worlds that triggers the emotions: the contrasting of the space and the anti-space. The virtual provides escapism because it differs from the mundane world; but it is also because of the state of the mundane world that that escapism is desired, which makes the acceptance of the immersion far easier. In the texts, the emotions involved vary from Case's desperate obsession with Cyberspace in *Neuromancer* to Hiro's definite, although casual, preference of the Metaverse over Reality in *Snow Crash*, to Jack's hiding in the Zone because he is unable to deal with his grief and loss in the mundane world in *Halting State.* Further, Jack, and even Sue, the stalwart of the physical world in *Halting State,* have been shown to respond with wonder to the vividness of the virtual world. The emotional value associated with the virtual need not be wholly positive. In all three texts, the physical world asserts itself against the virtual. Case rejects the temptation presented by the virtual Linda because she is missing something essential that he is unable to put in words, but which refers to her lack of physicality. Y.T. acts as a constant reminder to Hiro that Reality exists and it matters. Jack is forced to face his negative emotions when his own simulation unravels, but he is prepared to do so with the help of Elaine. Even as the characters start out by strongly positively valorizing the virtual,

an important aspect of the overall conflicts of the narratives brings out a reassessment of the initial positive value.

The emotional aspect of ekphrasis in the digital context is not new. According to Webb's definition of ekphrasis, the emotional aspect is a crucial factor in the ekphrastic process, as the speaker/writer is attempting to make the listeners/readers feel as though they were personally involved in the scene or situation evoked. Emotional vocabulary and devices evoking emotions can be seen in most ekphrastic poetry and prose. It can also be seen in most ekphrastic representations as the writer's original motivation to represented the original visual by means of words. Gibson and Stephenson have spoken about their respective original inspirations for their novels in terms of visuality; the former saw advertising posters and children's immersion at arcade games, and the latter envisioned *Snow Crash* as a graphic project. The original visual experiences were not directly translated into verbal representations, but they provided prompts for further verbal expansion and exploration. *Neuromancer* does not represent what Gibson saw; it represents Gibson's inspiration at the visual. *Snow Crash* represents the originally conceived graphic project. In contrast, *Halting State* was not spurred by a direct visual experience, but by an anecdote involving a paradox between the physical world and the virtual, which, we can assume, also involved an emotional element. The visual, and here, specifically the virtual, is imbued with emotional value and thus it attains significance. The emotional element is a key aspect which differentiates plain description from ekphrastic evocation. In Chapter 2, an alternative definition was proposed for ekphrasis: evocative verbal rendering of a *significant* visual. The emotional aspect – the production, representation, transfer or experience of beauty, thrill, fear, distress, awe, and so on – can be considered a defining factor of ekphrasis. No doubt further research on production and experience of emotion in the ekprastic process in general will be developed. However, for our purpose, while we can identify emotionality as an essential aspect of ekphrasis in general, it is not more specifically so in virtual ekphrasis to be counted among its defining principles.

The principle of separation directly leads to the third principle of virtual ekphrasis, which also relates to the research question of the dynamic between the viewer and the image. The borders between the two can be upheld by the principle of *interface*. All these proposed

principles are, by necessity, related to one another, but the principle of interface functions in close co-operation with principles of metaphor and separation. In computing, interface refers to a border across which two components exchange information. Typically, we refer to a graphical interface, such as the Windows or Mac OS systems, which allow users to input commands and receive feedback and information without much expert knowledge. Hence, interface has a translating function, as it makes human commands understandable to the computer. An interface allows us to make sense of the metaphor by creating a degree of separation. A visible interface decreases the transparency of a virtual world by reminding the user of the metaphor. When Jack introduces Elaine to Avalon Four in *Halting State*, the interface becomes visible when they 'move' from one place to another, and the landscape freezes but a set of runes appears to travel through the sky. Interestingly, this instance is one of the few of the interface being mentioned in the three texts. It is likely that the interface is not mentioned more because its overt presence decreases the transparency and the sense of immersion. However, interface can also be indicated by references to the reflecting devices, together with the 'short-cut' verbs mentioned above. In virtual ekphrasis, interface has a key role in distinguishing the virtual world from the mundane one, but its presence may be implied subtly.

The principle of interface makes possible the fourth principle of virtual ekphrasis, *participation*, likewise connected to the relationship between the viewer and the image. Throughout the thesis, it has been emphasized that in the case of virtual ekphrasis, the viewer is not simply a viewer, but an active user. As the three protagonists have strong emotional connections to their respective virtual worlds, they are driven to enter them and interact within them. This interaction, the process of active participation in the artwork, takes place via the interface. Similarly, we can expect that any user who regularly logs in to a virtual world does so via the interface because he or she wishes to do so – thus engaging in step eight of the process of technological immersion, as suggested by Ryan. The virtual experience is actualized as a pleasurable, artistic activity. The pleasure imminent in the experience is a manifestation of the emotional connection. Participation takes the form of the user experiencing the virtual world as an integral part of it. As Ryan observes, the user becomes part of the reality of the setting by being able to interact with virtual objects and virtual people. The three texts have presented this freedom to roam the environment and the

freedom to interact with it with varying levels of restriction. *Neuromancer* anticipates the change from abstract to representational virtual, but presents the latter as a space with a multisensory physical aspect. Smells, tastes and physical sensations – intimate senses – are evoked together with visuals and sounds. *Snow Crash* introduces a limitation in the participation in the virtual world, the lack of tangibility. Avatars refrain from attempts at physical interaction in order to not break the 'metaphor' but, paradoxically, the social custom comes to define the metaphor. The irreality of the virtual world is remembered every time that a normal physical gesture, appropriate in the mundane world in the same situation, cannot take place. In Avalon Four in *Halting State*, physicality is pretended – an avatar can say 'Ouch!' when it collides with something, although no physical sensation takes place.

The fourth research question posed by this thesis asked what virtual ekphrasis can contribute to the broader discourse on ekphrasis in general. This thesis has sought to show that due to their immersive and interactive nature, digital artworks are sufficiently different from other, non-digital, representations to merit consideration of ekphrasis in their own terms. Features and characteristics that have been applied ekphrasis of non-digital artworks in the past are, in many cases, either not applicable or not sufficient in the context of digital material. The intention of this thesis has not been to fragment the study of ekphrasis further, but, on the contrary, to pull together many of the individuals strings of enquiry relating to different aspects of ekphrasis. In the process of examining virtual ekphrasis, we have observed that the definition of ekphrasis as representing a significant visual encompasses all the different ekphrastic topics that have been proposed: artworks, rhetorical topics, cinema, digital graphics and others, anything that bears a high value of emotional significance. The purpose of ekphrasis as triggering a strong mental visualization of the relevant topic, together with an associated emotional experience, applies to any ekphrastic topic. Further, we have noted that the concept of the gendered dynamic between the viewer and the object is in need of updating.

The fifth and final principle of virtual ekphrasis proposed in this thesis suggests a function to virtual ekphrasis in particular, but this function could also be extended to cover ekphrasis in general. Each of the three texts analyzed in this thesis evokes dramatic situations of

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intense movement, using active verbs, similes and verb forms simulating the motion in question. In each text, the main narrative continues inside the reflecting device. The instances of ekphrasis analyzed in previous chapters include movement, dialogue and plot developments. They are very far from the 'stillness in the narrative' and the 'pregnant moment' as suggested by Mitchell and Krieger as functions of ekphrasis. Because of the nature of virtual worlds as immersive, interactive digital artworks, they are fundamentally imbued with movement, passing of time and change, even if all these things are essentially parts of the overall metaphor. They cannot be said to represent any sort of 'frozen' or 'eternal' time. Further, it would be pointless to attempt to 'enliven' them by means of verbal representation, because they already possess 'life' within themselves.

Instead, the scene from the virtual world, notional or otherwise, is re-created for the reader/listener. The producer of ekphrasis, who verbally creates an environment, must be able to connect to the listeners' emotions in order to create immersion, the experience of direct personal participation. Webb has pointed out that the rhetorical manuals advised the rhetors to feel the desired emotion in themselves first, before using that emotion to power the ekphrasis delivered to the listeners. Above, we have connected the notion of inspiration to emotions: inspiration is a powerful feeling of the perceived significance of a concept. That significance is transferred to the readers by means of ekphrasis, among others. By focusing on a detail or a concept in a manner that makes the reader (or the listener) feel that that detail or concept – an object, a landscape, a situation – is within his or her reach draws attention to that detail or concept and invites the reader to experience it and contemplate it. This thesis suggests that the fifth principle of virtual ekphrasis, and its primary function, is *sharing*. The writer, having been inspired by an active scene, wishes to 'initiate' his or her readers into the concept brought into being by that inspiration. The words are not competing with the original visual representation (notional or otherwise) but their primary purpose is to make 'visible' that which is not otherwise visible. The reader is invited to experience that which is not otherwise possible to experience, either at all, or at that moment. This thesis suggests that the notions of sharing and co-operative experiencing are concepts that the general discourse of ekphrasis may also find useful.

Finally, this thesis intended to examine the symbolic meaning of the representations of virtual worlds and what they might tell us about attitudes towards the digital, and specifically the digital visual, in the past thirty years. The initial hypothesis of this thesis expected that a clear change would be visible in these representations, as the public knowledge of the digital media and the general familiarity with it has increased. When Gibson was writing *Neuromancer*, he felt that there was significance in the way people seemed to want to inhabit the notional space behind the computer screen. As we have seen, his novel is very ambiguous about that space. It acknowledges that the space has a great deal of potential, but it is also very wary of that space, likening it to drugs, religion, hallucinations and addiction. Should a successful ekphrasis have transferred that wariness to the readers, causing them to step away from the prospect of the virtual? We have seen that instead, the novel became a seminal work in the series of fiction about technology, and that it influenced authors and technology developers alike. A significance was transferred, but it seems to have arrived as excitement rather than as caution.

In the Classical courts, the purpose of ekphrastic rhetoric was to bring about conviction through a particular desired emotion created by the verbal invocation of an emotional situation. This thesis suggests that a successful ekphrasis does not need to necessarily duplicate the emotion and value linked to the sense of significance. As ekphrasis is fundamentally a creative process, that process requires creativity to continue anew at each step. Gibson primarily wished to transfer to the readers the sense of significance relating to the notion of computer-generated space, but that notion was new and complex enough to include strongly ambiguous associations. Despite the ultimate valorisation of the physical over the virtual in the text, enough potential is provided for the reader to actualise as she or he prefers. The open ending offers a great deal of inspiring material to the reader: Case may have chosen moderation in his operations with cyberspace, but there is still part of him present in the virtual realm, where the 'physical ghost' of Linda and the incorporeal shade of Flatline are implied to reside. His caution has led to a conventional life with steady work and a partner, but the 'siren call' of the virtual is indicated to still sound from his consciousness.

In all the three texts considered in this thesis, this message of ambiguity persists. The virtual is depicted as a great advancement, an exciting realm full of potential, but, in each case, the virtual is shown to present a danger by getting out of control. The hubris of the programmers is brought down by AIs, viruses and other users who devise more creative ways to manipulate the environment. In *Neuromancer* and *Snow Crash*, that danger of out-of-controlness manifests visually: in the former, the simulated life-like environments disorientate Case, whereas in the latter, the virus is transmitted through the power of gazing a particular image. In *Halting State*, the danger is more 'virtual' in the philosophical sense, as the baseline conflict takes place in Jack's imagination, even as signs of the surface conflict, terrorism and espionage, appear as 'impossible' actions and features in Avalon Four. It has been noted that each novel has strongly influenced the subsequent ones to the point that the plot and the characters are comparable to a strong degree. From that point of view, the similarity of the attitude towards the virtual is, perhaps, less surprising than it would otherwise be. The intertextual adventure stories retell over and over again the same narrative, with characters and setting adapted to suit another decade in the real world, but the conflict, which centres on the loss of borders between the virtual and the physical, remains the same.

We have noted that the ekphrastic passages in these three texts often accompany narrative transitions across the border between the physical and the virtual. In *Neuromancer*, the examples considered occur typically as Case has 'jacked in' to cyberspace; firstly, when he returns to it after his long absence, and secondly, when he is intercepted by the AIs and taken to the representational cyberspace. In *Snow Crash*, we, again, have an introductory passage following Hiro's entry into the Metaverse, and, later on, Y.T. attempting to make sense of the ways Ng trespasses the customs of the Metaverse by introducing physical elements to the simulation. The examples from *Halting State* show Jack introducing Elaine to Avalon Four and Elaine navigating between physical and virtual features in various AR games. In these texts, ekphrasis functions in the contexts of transition, 'translation' of the metaphor from code to image and further into word, and immersion in the chosen reality of the metaphor.

On all levels, virtual ekphrasis operates on borders. This phenomenon is interesting when considered next to the suggestion that digital graphics allow the viewer to close the distance between him- or herself and the artwork by becoming part of the artwork. It has been suggested that in the case of traditional ekphrasis, inspiration to represent a still artwork by means of words – in other words, to express the strong emotional reaction at the personal encounter with that artwork – has been rooted in the forced separation between the viewer and artwork. It seems that when that distance is closed, inspiration still seeks separation. When borders are not provided, inspiration, and, consequently, ekphrasis, seeks them out and rebuilds them on new foundations.

Implications for future research

The work of this thesis is far from complete. It has suggested a new theoretical framework of virtual ekphrasis for considering literary representations of immersive digital graphics. This framework primarily draws from previous theoretical approaches to ekphrasis, but as we have seen, the topic is sufficiently complex to merit additional elements from theories of space, such as geocriticism and phenomenology, as well as other areas of semiotics, psychology, cognitive linguistics and computer science. An inevitable problem in such an interdisciplinary work is that each additional element provides an amount of tantalising potential for research, but only a moderate amount of that potential can be employed. Hence, the topic under consideration in this thesis provides a substantial selection of theoretical perspectives to be developed in the future.

In consideration of the previous scholarship of ekphrasis, it is notable that major scholars such as Mitchell and Heffernan have employed the semiotic methodology only in a very limited manner or not at all. The works on the poetics of ekphrasis would be very well complemented by studies of the semiotics of ekphrasis; not to replace the former with the latter, but to examine the two aspects in tandem, to contribute to the discourse on the relationship between word and image. Equally, we can observe that other works on word and image, such as those by Jay Bolter, often rely on semiotics to a great degree, leaving the poetics of ekphrasis outside their scope. A semiotic approach is particularly likely to

contribute to future discussions on the role of programming code in the interrelationship between digital and non-digital image and text.

Another fruitful approach would be a phenomenological exploration of virtual worlds, and virtual reality in general. Above, it has been discussed that the virtual is, ironically, defined by the physical, because our perception is tied to our physical existence. Comparison of virtual and non-virtual experience of space would contribute to our understanding of the relationship between virtual and non-virtual, which, as we have seen from the texts studied in this thesis, is still in its infancy and ridden with suspicion and antipathy. Such a study need not be restricted to a philosophical level: it provides an opportunity to analyse our psychological and cognitive functions in response to environments we know to be virtual but which we choose to treat as 'as-though real'. Further, the field of cognitive linguistics would provide an interesting methodology for examining the process of rhetoric transfer and creation of emotions in evocative ekphrasis.

The five principles of virtual ekphrasis proposed above are, by necessity, themselves only a starting point, and it is hoped that they can be further examined and developed in the future. In terms of material that is ripe to be examined, this thesis has specifically focused on virtual worlds but this form of digital graphics is not the only one. In addition to Lindhe's work on electronic literature, plenty of potential remains in this field to be analysed and discussed. Likewise, the interplay between non-digital word and the digital image examined in this thesis would form a natural point of comparison with the dynamics between digital word and digital image. The scope of this thesis has not allowed for consideration of new interactive narratives, or new forms of narrative and poetry that have started to appear on social media, many of which have the potential to include images. Other forms of the virtual that have only been briefly mentioned in this thesis, such as augmented reality, will also provide a great deal of material for analysis as the relevant devices and games are starting to come online. Similarly, in terms of comparing real and fictional technology, Oculus Rift and other headsets will offer a real-life experience of even more intense immersion than the screen-based virtual worlds dominant so far have done.

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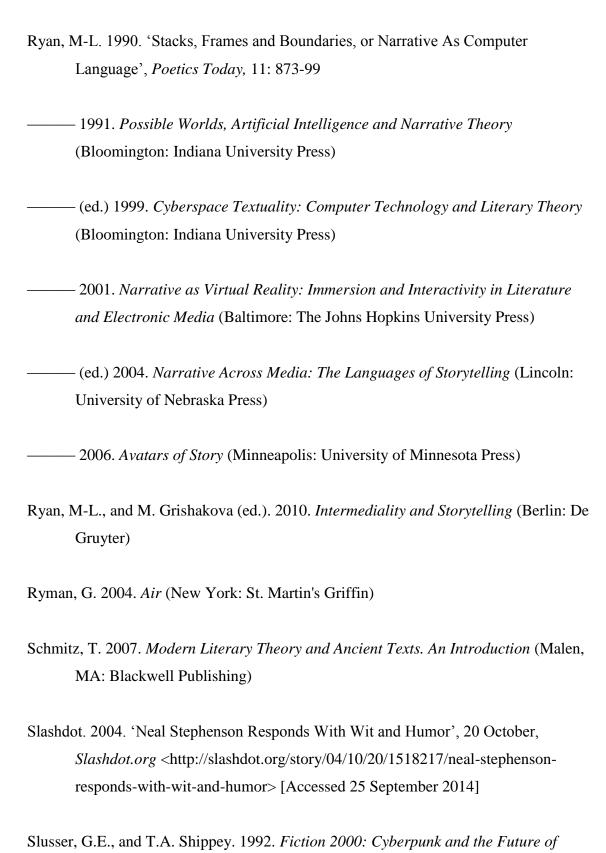Research* 1.1 <https://journals.tdl.org/jvwr/index.php/jvwr/article/view/291>
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