The Legend of Zelda **and Abraham Maslow's Theory of Needs:**
A Social-Psychological Study of the Computer Game and its Players

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Abstract

This thesis is concerned with the prosocial effects and social psychological pleasures of computer game play. It argues that much of the research on this area has focused on the search for negative effects, ignoring possibilities of the positive. Based on both email and face to face interviews with players of Nintendo's *The Legend of Zelda: Ocarina of Time*, the thesis considers their testimony alongside Abraham Maslow's Hierarchy of Needs to reveal numerous benefits that engagement with the computer game may bring. These benefits include not only the prosocial - the strengthening of relationships within families and between friends - but also the more deeply psychological, helping to satisfy needs for development and growth. The thesis argues that such findings not only reveal a great deal about those studied but are also suggestive in relation to the wider computer game audience. Furthermore, such findings draw attention to the fact that if the computer game - a cultural form becoming ever more ubiquitous - is to be understood in its entirety, then there is a need for further research on its prosocial and positive psychological effects. Finally, the thesis critically demonstrates the value of Maslow's theory for Computer Game Studies and offers a methodology through which future research may be undertaken.

Declaration

No portion of the work referred to in the thesis has been submitted in support of an application for another degree or qualification of this or any other university or other institute of learning.

<u>Acknowledgements</u>

I would like to express my gratitude to the numerous people who have helped me develop and complete this project. I am especially indebted to my supervisors, Graeme Kirkpatrick and Gemma Edwards. Graeme, who has been here since the start, has been vital in nurturing the project from conception to completion. Gemma, who came on board in the project's latter stages, has also played a crucial role in shaping the thesis. Both have provided essential, and much appreciated, intellectual, moral and practical support. I would also like to thank all others at the University of Manchester who provided assistance at various times. These include Ana Carden-Coyne, Jason Rutter, Mike Savage, Helen Wood and Ann Cronley, the final of whom always gave swift and cheerful advice on essential administrational matters.

Special thanks go to my interviewees, both email and face-to-face. I owe them a particular debt of gratitude. Without their enthusiastic co-operation, this thesis would not, of course, exist.

The support of my parents, Eileen and Roy, and my partner, Lindy, has also been vital to this whole process. Their help and encouragement has been unwavering throughout what must have been an occasionally trying six years. This thesis is dedicated to them.

Acronyms and Abbreviations

AAG	Action Adventure Game
BBFC	British Board of Film Classification
CMC	Computer Mediated Communication
FAQ	Frequently Asked Question
FTF	Face To Face
MMORPG	Massively Multiplayer Online Role-Playing Game
N64	*Nintendo 64* Game Console
NES	*Nintendo Entertainment System*
PEGI	Pan European game Information
RPG	Role Playing Game
SNES	*Super Nintendo Entertainment System*
VCS	Atari's *Video Computer System*

To aid succinctness of expression, the *Legend of Zelda* series is often referred to as *Zelda* and *Ocarina of Time*, as *Ocarina*.

Introduction

The Legend of Zelda and Abraham Maslow's Theory of Needs

Conception and Theoretical Framework

This thesis is concerned with exploring the positive effects of the computer game[1], and should be understood as a response to prevailing degradation of the form. During the period of the thesis' gestation, in 2003-5[2], computer games were making negative headlines. Rockstar games' *Manhunt* (2003), for instance, was - inaccurately, as it transpired - linked by the UK media to the murder of teenager Stefan Pakeerah, while the same company's latest entry in their *Grand Theft Auto* series, *San Andreas* (2005), was criticised for a modification allowing supposedly explicit sexual content to be accessed.[3] This was not a unique period: the computer game has been attacked by the popular press for years[4] and, as a little digging unearths, it has also fared very badly in the psychological literature.[5] The computer game has seemingly replaced the position once held by cinema, the comic book and home video respectively as pop-culture's whipping boy: here is an Aunt Sally of the digital age. With so much anti-game feeling around, it can be difficult to believe that there is any good in them at all.

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[1] In this thesis, the term 'computer game' is used to refer to all games played on digital devices. This decision resulted from a desire to use the plainest term possible, with 'computer game' being not only most broadly encompassing, but also relatively free from specific associations. The term 'video games', for instance has, historically, been used in reference to games played on console and, more recently, the term 'digital game' has been used almost solely by the academy.

[2] This is the period during which I was working on my Master of Arts degree in Computer Game Studies.

[3] This is known as the 'Hot Coffee Modification', so called because of the euphemistic nature of the word 'coffee' in particular contexts.

[4] The computer game has periodically generated bad press since its introduction to the fringes of popular culture in the 1970s. Perhaps the most well known examples of earlier games causing outrage, for a number of reasons, include *Death Race* (Exidy, 1976), *Custers Revenge* (Atari, 1982) and *Wolfenstein 3D* (Apogee Software, 1992).

[5] Reviews of the psychological literature are discussed in chapter one, and returned to in the thesis' conclusion. It is worth noting here, however, that negative comments are still being made in the scholarly literature, as exemplified by a recent (2009) paper from media and cultural theorist David Golumbia. Computer games such as *World of Warcraft* (Blizzard Entertainment, 2004), he argues, are problematic, because instead of allowing for harmless or enjoyable play, they encourage a much less healthy 'fanaticism of the *lust for power*' (Golumbia, 2009: 189).

Running parallel to the criticisms, however, are sales figures. Computer games were selling extremely well. In terms of profit, for instance, they were outperforming films (Newman, 2004: 3)[6]. In addition to this, there were other statistics, such as the high number of consumers and the duration of player engagement. 'At the 2002 Electronic Gaming Expo… Sony announced global shipments of 30 million PlayStation 2 consoles' (2004: 3), whilst 'typical users [of online roleplaying games] spend 20-30 hours a week inside the fantasy. Power users spend every available moment. Some 20 percent of users…claimed that their fantasy world was their real place of residence; the earth was just a place you go to get food and sleep[7]' (Castronova, 2005:1-2). Such statistics allowed another thought to take root: surely computer games would not sell as well, nor vacuum up so much time if they instigate only negative emotions. In other words, surely so many people would not pay so much money and spend so much time simply to feel bad.

It seems, therefore, that there is a place for a proper consideration of what exactly it is about the computer game that draws players to it in such numbers and for such periods of time. Surely there has to be something emotionally or psychologically enriching, otherwise, why would players bother? Subsequently, the following, fundamental question is raised: what motivates people to play computer games?

Within the vast literature that touches upon motivation, one name dominates - that of Abraham Maslow[8], and, in particular, his hierarchy of needs, something business theorist James Gibson has called '…one of the most referenced motivation theories ever (1994: 219).' This thesis suggests that Maslow's hierarchy of needs provides a useful conceptual framework within which to explore the prosocial effects of gaming. It not only provides a set of valuable concepts, but it is also a theory pitched in social psychological terms, enabling it to speak directly to the majority of other (negative) studies on the computer game and its players which have also, largely, been psychological in orientation. On a more theoretical level, Maslow's criterion for need

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[6] Even though hardware sales are often included in such statistics, the sales figures are still remarkable.
[7] Such a notion resonates with Abraham Maslow's hierarchy of needs, the backbone of this thesis. The thesis argues that food and sleep are some of the only need satisfactions not possible through gameplay.
[8] While Maslow's work has weaknesses and its critics (and this is discussed in the next chapter), it continues to influence.

satisfactions is comprised of many elements that seem to exist in the computer game. Perhaps most importantly of all for the aims of this thesis, these needs concern healthy, positive, human growth.

While discussed at length in the main body of the thesis, it is worthwhile to provide a brief summary of Maslow's work here. Maslow was a psychologist who began work in the field in the 1930s. By the 1940s, ideas around human needs had started to germinate and in 1954, Maslow published his first major work on the subject - *Motivation and Personality*. Here, and in further pieces published over the course of his lifetime, Maslow argues that human beings have both basic and higher needs and constantly seek their satisfaction. Maslow argues that basic needs include the need for physiological satisfactions such as food, water and shelter, as well as the more abstract ones such as emotional safety and a sense of belonging. The higher needs, on the other hand, include the need for more sophisticated satisfactions such as the need for beauty, justice and playfulness. Maslow argues that higher needs must be satisfied if a person is to be truly content or self-actualised. A self- actualising person, according to Maslow's definition, is someone who has satisfied all basic needs, is constantly seeking out ways to satisfy higher needs and, by doing so, is achieving his or her full potential.

The Cultural and Commercial Background

With this theoretical framework in place, work on the thesis began in earnest in 2005, a time when the computer game and its industry were on the cusp of great change. The console market had just begun its regular technological transition into what is termed - by the industry and consumers - as the seventh generation[9], with the arrival of

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[9] The genealogy of the console is traced in much scholarly work, including Aoyama, Y. Izushi, H. (2003) 'Hardware gimmick or cultural innovation? Technological, cultural and social foundations of the Japanese video game industry', in *Research Policy* 32; Maillet, S. de Meyer, G. (2005) 'The history of the videogame', in Raessens, J. Goldstein, J. (eds) *Computer Game Studies Handbook* MIT Press and Johns, Jennifer, (2006) 'Video games production networks: value capture, power relations and embeddedness'. *Journal of Economic Geography, Vol. 6, Issue 2, pp. 151-180, 2006.* Perhaps most recently, the computer game has been periodised by console by game scholar, Mark Wolf in his book, *The Videogame Explosion: a history from Pong to PlayStation and beyond* (2008). Discussions of the generations also proliferate on the Internet: http://www.informit.com/articles/article.aspx?p=378141&seqNum=. It must be

Microsoft's *Xbox 360*, released in November and December in the US and Europe respectively. While the previous generation - in the form of Microsoft's own predecessor to the *Xbox 360*, the (un-suffixed) *Xbox*, Sony's *PlayStation 2* and Nintendo's *GameCube* - offered online connectivity, the *Xbox 360* is the first console for which online play eventually became a key selling point. It would be some months before Sony and Nintendo joined this interconnected seventh generation and so, for a time, this period saw a mix of the old and new: traditional single player franchises and experiences continued while Microsoft's technology offered more and games with multiplayer and downloadable content. It also introduced the concept[10] of the console as entertainment hub - the playing of DVD and High Definition discs[11], as well as the creation of friends' networks and downloadable content. In most respects, though, this move into the next generation mirrored earlier times, which historically saw some technical innovation by one console manufacturer mimicked by its competitors. The situation would reach some sort of equilibrium before the cycle would begin again several years later.

At the time of writing however, it is startlingly apparent just how *unlike* the historical precedents this change was. The *Xbox 360* was shortly followed by Sony's *PlayStation 3* and Nintendo's *Wii*. The former offers much the same as the *Xbox 360* in terms of online play and overall connectivity, while the latter offers a different, more kinetic, form of play experience.[12] As noted in computer game scholar Jesper Juul's book, *A Casual Revolution* (2009) and discussed in chapter two of this thesis, such changes in input methods has helped spawn a different demographic of computer game players, and these are known as 'casual gamers'. The casual gamer demographic has also been boosted by games' presence on social networking sites such as *Facebook*[13]

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noted, however, that this way of referring to games technology (in terms of generations) seems to have passed and this is touched upon later in the body text.

[10] It could be argued that Sony did this first, albeit in a limited capacity, with their *PlayStation 2* offering DVD playback facilities.

[11] The High Definition system was quickly replaced with, and made obsolete by, the 'Blu-Ray' format.

[12] These in turn have, of course, been mimicked by rival console manufacturers.

[13] Computer game scholar, Ian Bogost, whose thoughts on definition of the form are included in the thesis' concluding comments, created the *Facebook* game *Cow Clicker*, a deliberately absurd piece intended to satirise the shallowness of some social games: 'One of things that interested me was: 'How many features could I add to the game without adding any gameplay?'' (#*Edge*, 227: 76). It has,

and *Twitter*. Online connectivity has also changed the technological shape of the market, with consoles now no longer being shipped at the peak of their power: they are easily upgradable via software rather than hardware alterations and receive regular 'firmware'[14] updates to keep them current. Significantly, the only major console which is receiving a hardware update - Nintendo's *Wii*, in the shape of the *Wii -U* - is evolving its current console rather than completely reinventing it[15]. Games too, have also evolved as a consequence of connectivity, with almost all major releases having an online component. Perhaps the biggest innovation, however, is how the computer game is delivered to its audience: while games *are* still currently available in boxed form, many are delivered direct to the console via downloading. This has revolutionised gaming on handheld consoles also, with the arrival of the smartphone, perhaps first fully realised and then popularised by Apple's *iPhone*[16]. Such innovations, along with a general lowering of pricing for digitally distributed pieces, have pushed the computer game further into the mainstream than ever before and it seems likely to become ever more 'part of the cultural furniture'(Poole, 2000: 2). Understanding the people who play computer games is, therefore, more necessary than ever, as is redressing the bias of the psychological literature, a body of work which has, historically, focused on the negative. Indeed, in the words of Craig Anderson, a psychologist who has spent many years surveying such literature, 'Unfortunately, there has been relatively little research on purely prosocial game effects.' (2010: 171).

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somewhat ironically perhaps, become incredibly popular: 'the game has generated as many as 50,000 players a month' (227: 76). A full discussion of the game's development can be found at Bogost's website: http://www.bogost.com/blog/cow_clicker_1.shtml

[14] Firmware is a piece of software essential in controlling a piece of hardware. It is, effectively, its brain.

[15] The main evolution of the *Wii U* is its controller, which has some properties of a tablet PC. This controller will allow some games to be played on both the television and its own screen.

[16] In speaking about the mobile phone game market, one game developer, Neil Young, notes the following: '**…**at the centre of everything is the iPhone**.** Before that, everything was pretty lame'. This is part of his keynote speech from the 2009 Game Developers Conference. Transcriptions of his speech can be found at various Internet locations, including here: http://kotaku.com/5180413/gdc-panel-why-the-iphone-just-changed-everything

The Method: *The Legend of Zelda* and its Players

This thesis, then, is an attempt to redress the balance by undertaking research on social-psychological benefits and '*prosocial* game effects'[17], and determining whether players of computer games do experience anything positive through their play. On a theoretical level, I argue that such benefits and effects can be explored in relation to the concept of human psychological 'needs' and the extent to which the computer game is able to satisfy them. I suggest that Maslow's theory of needs - a theory which allows for positive human behaviours to be identified - is a valuable basic framework in this respect, and provides useful tools with which to explore social psychological benefits and prosocial effects. It is clear however that the concept of 'needs' is a complex one, and so is the task of determining whether or not they are satisfied through computer game play. Maslow's theoretical framework - while appearing immediately useful - needs to be subjected to empirical scrutiny. Consequently, a qualitative research strategy is employed, which involves speaking to the players themselves via in-depth semi-structured interviews. Through analysing gamers' narratives, the thesis explores the extent to which the 'basic' and 'higher' needs of human beings can be said to be satisfied through computer game play. In the process, the thesis is also able to provide a critical appreciation of the role that Maslow's theory might play as a framework within Computer Game Studies for research on the prosocial and positive psychological effects of gaming.

Maslow's theory has never been used before in any examination of computer game effects or in computer game studies generally. Such an oversight may explain the comparative lack of positive effects found thus far. This research, then, being the first to investigate it, will determine if and how useful Maslow's theory is for both social psychological studies of games and players generally, and for the growing discipline of Computer Game Studies specifically.

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[17] In this thesis, 'prosocial game effects' means anything socially positive that may be attributed to the playing of computer games. This ranges from simply spending time with friends to allowing game content to directly (and positively) influence social behavior.

Maslow's work is used in conjunction with *one* particular game and its players. This game is *Legend of Zelda: Ocarina of Time* (1998), an entry in *The Legend of Zelda* series of computer games, developed and published by Nintendo (a Japanese company established in 1889). The first *Legend of Zelda* game was released in 1986 and the series has received semi-regular installments ever since; the latest - *Skyward Sword* - was released worldwide in November 2011. *The Legend of Zelda* is an action adventure game (or AAG) in which the player controls a character, named Link, tasked with the objective of overcoming all obstacles (in the form of enemies and puzzles) to rescue the kidnapped princess Zelda. All games in the series share common elements of characters, gameplay devices, and variations of the above objective and the series remains extremely popular series both critically and commercially. The high number of Internet sites dedicated to it – which will be discussed in chapter three - is but one indicator of its huge audience.

Ocarina of Time, the fifth *Legend of Zelda* game, has long been held as the pinnacle of the series, receiving glowing reviews at the time of its release and maintaining a place in numerous 'best ever' lists since. As will be discussed in the main body of the thesis itself, this game is the right choice as the focus for a study on player satisfactions not only because of its standing, but also because of: 1. its ludic properties (it has everything that a computer game needs to have if is to properly qualify as a 'computer game'); 2. its violence (allowing it to be considered on an equal footing to computer games studied in the negative effects literature[18]); 3. its large fanbase (allowing for a diverse population from which to draw interviewees). Finally, the use of a specific game, rather than a genre, is the best way to maintain a focused and detailed discussion throughout the thesis. *Ocarina of Time* thus acts a case study which is able to anchor both theoretical concerns and empirical reflections.

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[18] On this point, it is worthwhile to note the following comment on the subject of what exactly constitutes a violent computer game: 'The first of popular games to be considered violent was *Pac Man*. This game consisted of a small circle with a mouth that tried to eat pills and destroy ghosts. Although this hardly seems violent by today's standards, it was one of the first games to involve destruction of any kind'. (http://www.personalityresearch.org/papers/kooijmans.html) While this is taken from an undergraduate paper and whether *Pac-Man* was the *first* popular game to be considered violent is debatable (*Death Race* appeared several years earlier, for instance) it nonetheless makes an interesting point regarding the definition of violence in games.

Overview of Chapters

Chapter one will provide background to Maslow and his theories. In particular, I will discuss Maslow's hierarchy of needs which charts the need for the basic level satisfactions of love, belonging and esteem as well as the more abstract, higher level, satisfactions of truth, beauty and justice. At this point, I will suggest Maslow's hierarchy of needs as a useful basic framework for exploring the psychologically beneficial and prosocial effects of gaming, although what those effects are and the ultimate critical value of Maslow's work is to be ascertained through the analysis of the empirical data. In order to aid this critical application of Maslow, this chapter will also discuss and evaluate criticisms of Maslow's work. I suggest that the common criticism of Maslow's work – its individualism – is not a problem for this research which attempts to determine individual, psychological level satisfactions. I also address his individualism by positioning the computer game and its players, and the benefits of play, in specific social contexts. The solution to overcoming the other commonly cited shortcoming of Maslow's theory - its lack of empirical work to back up the concepts - will also be presented in this chapter by noting my intent to use first-hand research. It will be also be stated in chapter one that this thesis differs from the majority of other psychological studies in its intent. It takes a positive approach: attempting to determine if there are benefits[19] to be gained from playing computer games and if so, what these might be. This study, then, is, from the outset, purposely directed towards identifying the positive impact of computer games. This is because it aims to fill the gap in the literature that ignores social psychological benefits and prosocial effects. That is certainly not to say, however, that my analysis of the data will be blinkered to negative effects, but in choosing Maslow's theory, I employ a framework that makes positive effects identifiable. Finally, chapter one will also consider a number of other useful theories, from the field of developmental psychology.

Chapter two will provide a consideration of the theories which are necessary to forming a definition of the computer game, something important when attempting to

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[19] Not *only* behaviours, however, the preferred focus of traditional effects studies.

discover its effects. It will open with a discussion of traditional games and play through the work of those who have analysed them most thoroughly: Johan Huizinga and Roger Caillios, thinkers who heavily influence computer game scholars with their analyses and categorisations. The chapter will draw attention to how these scholars identify the inherent benefits of play and games and note how these inherent benefits make the use of Maslow's theory - so far overlooked by Computer Game Studies - so fitting a framework within which to further explore them in the digital age. The chapter will then consider how computer games are both similar to and different from these traditional games. It will highlight their differences by turning to computer game scholars (in particular Barry Atkins) who note that computer games tell stories, interactive ones, with players as their co-authors, the gameplay providing a new, technologically advanced, nib with which to write. I will then discuss the work of Jesper Juul and suggest that it is particularly useful in helping us to understanding the form of computer games. His definition of computer games being *half real*, that is 'a set of rules as well as a fictional world' (2005: 199) will provide the basis for a new definition that will be used throughout this thesis: that a computer game is a combination of rules, fiction and virtual playspace. This understanding of the features of the computer game will allow for an individualistic exploration and assessment of the form's impact on its players to be undertaken in the following chapters.

In addition to discussing and defining its formal characteristics, chapter two will also consider the computer game's cultural position and argue that it is an evolved form of *domesticated technology*. This theory, popularised by sociologist Roger Silverstone (1994), makes the case for a positive impact of technology in society, an impact which can contribute towards emotional and interpersonal development, not one which atomises and alienates people, as argued by some critical theorists and thinkers. These thinkers, such as Albert Borgmann and Neil Postman, argue that we are 'amusing ourselves to death' (1985) with entertainment technology, that it robs us of our capacity to be creative and to think. Of course, media reports, effects theory and the negative psychological studies of games noted earlier, in the introduction, are also underpinned by such thinking. This closing section of chapter two, then, will argue that the unique, intensely interactive nature of computer game technology helps bind people together

even more effectively than through the older technology discussed by Roger Silverstone.

Chapter three is concerned with method. As computer gamers are not as identifiable and visible a group as some other hobbyists (there are many easily identified sports clubs for example), then the Internet - with its great numbers, diverse users and wide reach - is used as a major means of contact as well as a means of data collection. This chapter will detail the process involved in the narrowing down and selection of websites and the methods employed in gathering and interpreting interview data. This builds on methods employed by pioneers in sociological research via the Internet (or, to use one of the pioneers' terms, via Computer Mediated Communication) Chris Mann, Fiona Stewart (2000) and Christine Hine (2005). These methods include means of contacting gatekeepers, interviewees, the use of email for interviews and the associated ethical considerations. I will also discuss the use of traditional (Face to Face) interview methods and how and why *both* Internet and traditional methods are employed. Chapter three will also introduce the important innovation of the *cognitive playthrough*, a step by step analysis of gameplay which offers a new means by which to map and understand computer games' virtual *playspace*. The chapter will discuss how this playthrough contributed to both the formation of interview questions and the final analysis of the data.

Chapter four is the first of two which will discuss themes that emerged from the interview data. Some of these themes raised the issue of play in the home and obliged me to situate my interpretation of the data in the literature on domestication that will be discussed in chapter two. These particular themes emerged from responses to the early interview questions, where interviewees discussed their earliest memories of playing computer games. I will focus on how the interviewees use computer game technology to form or strengthen bonds with family and friends. I will argue that binding people in such a way allows for the possibility of some Maslovian needs to be met, these being those of love, security and esteem.

Chapter five will continue to examine the interview data, with a more specific focus on interviewees' responses to *Ocarina* itself and will argue that the game's aesthetics engender a number of player responses. I will argue that the interviewees gain

many positive higher level satisfactions from play with *Ocarina.* In doing so, I will consider how the interviewees respond to the game in a variety of ways, from enjoying the beauty of its simulated environment, to becoming active moral agents when a twist in the narrative corrupts it. I will explore how *Ocarina* presents cognitive challenges; through both its discreet puzzles and the meta-puzzle of its narrative, and the particular ways in which the interviewees gain satisfaction from their resolutions. I finally consider the various means by which *Ocarina* allows its players to indulge in playful self expression and creativity, and what this means to them.

The conclusion will discuss key findings and arguments. It will argue that while the computer game *may* have some significant antisocial or negative effects, this research finds little evidence to support such effects. I will argue that the computer game *does* however, have significant prosocial effects and social psychological benefits which are evidenced in the narratives of game players themselves. Finally, I will outline the theoretical and methodological contributions of the research and offer suggestions as to how such theory and method may be used to guide future study.

Chapter One

Games, Play and Abraham Maslow

Introduction

The neglect of positive aspects of play has been a feature of modern thinking on the issue of play in regard to computer games. This is in addition to a general academic context that has been largely quite hostile to games and play which often places them into various kinds of disciplinary ghettos such as developmental psychology (in particular child psychology) and psychology which deals with various pathologies (of addiction, violence and anti-social behaviour). In order to be properly understood, computer games need to be considered in wider interdisplinary terms. Doing this does involve using another psychological theory (that of Abraham Maslow), but also consists of broadening the focus of the study of the computer game onto wider social, cultural and media aspects. The chapter will open with a repudiation of the negative bias in the psychological literature on computer games and an account of some earlier positive studies. Next, the chapter will introduce the key concept underpinning this thesis, the theory of Abraham Maslow. It will argue that because of play and games' inherent value, Maslow's theory offers untapped potential for the study of computer games - and the computer game player - today, by offering a theoretical framework which allows them to be understood in positive, enriching, terms. The chapter will then offer a critical discussion of Maslow's work, and note how its perceived weaknesses of individualism and lack of empiricism will not be reproduced here. Finally, the chapter will offer some theory from developmental psychology which helps to further illuminate the benefits of computer game play and which, along with Maslow's work, will also be explored later in this thesis in relation to both a textual analysis of *Ocarina of Time* and empirical research with its players.

1: Psychology, Play and Games

Play and games have meaning and value. Perhaps the most thorough psychological studies of play concern children, and these studies have emerged from the field of developmental psychology[20] and from thinkers such as Jean Piaget and Donald Winnicott. The relevance of their work, along with that of another working in the same area - Bruno Bettelheim[21] - is discussed briefly in chapters four and five. In terms of studies on traditional play and games beyond the field of developmental psychology, however, the literature is – relative to that on computer games – sparse. What little there is of it, though, is overwhelmingly positive, often linking play to improved social integration and intellectual ability, as the findings from a fairly recent study exemplify: 'Among cognitive activities, reading, playing board games, and playing musical instruments were associated with a lower risk of dementia' (Verghese, *et al*, 2003: 11). As will be seen in the discussion of Johan Huizinga and Roger Caillois in the following chapter, such affirmative findings are to be expected: social and intellectual enrichment is integral to their definitions of play and games.

Much of the early investigations into the psychological impact of computer games, however, focus on establishing harmful effects, and research questions (and subsequent papers) are often framed negatively. Research has often sought, for example, to establish evidence for increases in violent or anti-social behaviour or addiction. This negative focus is still very much prevalent today. The past year alone, for instance, has seen the publication of two particularly damning papers. One of these is by psychologists Tobias Greitemeyer and Neil McLatchie and concludes that, '…playing violent videogames - because of their tendency to increase denial of humanness to other people - may not only increase interpersonal aggressive and antisocial behavior but also cause players to harm another person' (Greitemeyer; McLatchie 2011: 661). The second paper is by social psychologists Brad Bushman and Bryan Gibson, who -

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[20] In the words of computer game scholar, Jesper Juul, 'Play studies [is] a field that is more often orientated towards the play of children' (2009: 10).

[21] Bettelheim is mentioned separately from Piaget and Winnicott here, as it is his work on Fairy-Tales, rather than play as such, which is (briefly) considered and discussed later in this chapter and in chapter five.

working from the hypothesis that violent computer games *do* cause violent behaviours - conclude that even *thinking* about them has negative effects: '…the aggression stimulating effects of a violent video game can persist long after the game has been turned off, if people ruminate about the violent content in the game' (Bushman; Gibson 2011: 31). [22] Such a focus positions these studies within the wider media-effects debate. Indeed, frameworks for much of this early work derive from studies of more traditional media forms, in particular television.[23]

It must also be noted, however, that *some* research with a more positive approach was also undertaken in the 1980s, such as Gary Selnow's, 'Playing Videogames, The Electronic Friend' (1984). This enquiry concludes with the words, 'They [the adolescents studied] are temporarily transported from life's problems by their playing, they experience a sense of personal involvement in the action when they work the controls, and they perceive the videogames as not only a source of companionship, but possibly as a substitute for it' (1984: 155). As will be seen in the discussions of chapter five, this sense of personal involvement is certainly felt by my interviewees in their playing of *Ocarina*.

There are also two book length discussions of note, one published in 1979, and the other in 1983. David Sudnow's, *Pilgrim in the Microworld* (1979)*, while not an academic text, nonetheless provides a unique psychological insight into the experience of playing a computer game, specifically Atari's *Breakout*. This play is unexpectedly prompted when the author collects his son from a videogame arcade. A sociology professor and musician, Sudnow tells not only the story of his 'addiction' ('I woke up not eight hours later and I wanted a fix, so I plugged myself right in with the first cup of coffee' (1979: 60)) but also computer game play's pleasurable effects. One of these effects is the speed at which it is possible to feel a sense of mastery. In Sudnow's words, 'It's as though you could be given a violin, seated in the middle of the Julliard String Quartet , and there'd be a way of playing the music that allowed you to do your part

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[22]Other examples include, Colwell, J., Grady, C. & Rhaiti, S. (1995). 'Computer games, self-esteem and gratification of need in adolescents' *Journal of Community and Applied Social Psychology, 5, 195–206; Colwell, J. & Payne, J. (2000). 'Negative correlates of computer game play in adolescents'. British Journal of Psychology, 91, 295–310;*

[23] A typical example includes J.R Dominick's 'Videogames, Television Violence and Aggression in Teenagers', published in *Journal of Communication, 34, 136–147*

altogether perfectly for a little while'(1979: 68). Despite Sudnow's account being highly subjective, it nonetheless provides a keyhole into the psychology of the player and the pleasures that computer game play affords them.

The other publication is the first significant attempt at understanding the computer game player in general. Seemingly largely forgotten now[24], Lawrence and Cheryl Loftus' *Mind at Play* (1983) offers some thoughtful insights into the motivations and pleasures of the computer game, with two chapters – 'Why Video Games are Fun' and 'Games and the Cognitive System'[25] – being especially illuminating. The first discusses, '…the psychological concepts of reinforcement, cognitive dissonance and regret' (1983: 11).[26]The second further explores cognition and discusses the filtering of information, use of short and long term memory and expectancy. In this chapter, the authors also boil the experience of play down to problem solving and discuss player mastery of the early computer games (with *Pacman* (Namco, 1980) being referenced most often) in terms of 'the three major aspects of a problem solving situation: (1) the original state, (2) the goal state, and (3) the rules'(1983: 75), a proto-definition of the computer game which would later be echoed by some dedicated computer game scholars.

Work on the psychological effects of computer games really started to gain momentum in the following decade. While, as noted above, much of the work remains focused on discovering negative effects[27], a little of the research in the 1990s and into the 2000s had a more open agenda.[28]In 2004, for instance, psychologist Mark Griffiths

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[24] It is forgotten inasmuch as it is never referenced in modern Game Studies papers.

[25] In reference to one of the earliest pieces of computer game research, for instance, a PhD on learning (Malone, 1980), Loftus and Loftus discuss an 'optimal level of informational complexity…the environment should be neither too complicated nor too simple with respect to how much the learner knows' (1983: 42). This 'optimal level' resonates with Mihaly Csikszentmihalyi's concept of *flow* and notions of cognitive challenge discussed throughout this thesis.

[26] The final of this triplet is especially intriguing. 'Regret' in computer games, explain the authors, is when a bad move is made and the player wants to correct it and attain the successful alternative: 'Naturally, given the opportunity to make that alternative world a reality and eliminate all regret, you'll avail yourself of the opportunity. You play again' (Loftus and Loftus, 1983: 31).This is similar to computer game scholar John Paul Gee's concept of '*probe*, hypothesise, reprobe, rethink'(Gee, 2008: 90) noted and discussed in chapters four and five.

[27] A full picture of such research from the early 2000s is noted by Griffiths, 2004: 339.

[28] This more favourable research coincided with the arrival of Computer Game Studies as a discrete discipline at the turn of the millennium. Such positive work may be coincidental, but it may also be due to the reasons for the discipline's rise: the greater availability of computer games and information on them

discussed the growing number of encouraging findings into computer game use, and notes a variety of positive effects. He summarises the research as showing:

> In the right context, videogames can have a positive health benefit to a large range of different sub-groups. Videogames have been shown to help children undergoing chemotherapy, children undergoing psychotherapy, children with particular emotional and behavioral problems…In terms of videogames being distraction tasks, it seems likely that the effects can be attributed to most commercially available videogames. (Griffiths, 2004: 341)

Some positive research has continued to trickle through. In a 2005[29] study, several Hungarian psychologists considered player motivations and conclude that, 'Besides the possibility of the direct and easily understandable feedback…there is also place for varying execution, revaluation of time dimensions. The needs for challenge and exploration can be compensated in the virtual world of games' (Eglesz, 2005: 124).

Even more recently still, in 2008, psychologists Lawrence Kutner and Cheryl Olsen published a book length consideration of the effects debate in regard to computer games. The book, *Grand Theft Childhood*, concludes that 'the strong link between video game violence and real world violence and the conclusion that video games lead to social isolation and poor interpersonal skills are drawn from bad or irrelevant research, muddleheaded thinking and unfounded, simplistic news reports' (2008: 8). The same year also saw the publication of *Powering Up: are Computer Games Changing our Lives?* by Rebecca Mileham. Though not connected to Computer Game Studies or the academy more generally (it instead is a project of The Dana Centre, part of the UK's Science Museum), it still has well researched and positive points to make about the effects of play. In answering the question, 'Are games good or bad?', for instance, Mileham uses evidence[30] to support an affirmative argument, noting that the view

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has attracted a great number of researchers from a large number of fields. This, in turn, has allowed for a wider variety of foci.

[29] 2005 also saw the publication of popular science writer Steven Johnson's *Everything Bad is Good for You, a* significant portion of which is given over to computer games. The book's title provides an acknowledgment of the disdain in which popular culture – and, in particular, entertainment media - is held.

[30] The evidence cited includes reports into the use of computer games in cognitive therapy (David G. Walshe *et al*, 2003) and to treat phobias (Bouchard, S *et al*, 2006).

promoted by the majority of the media that 'games are a cultural evil' is 'outdated and ill informed' (2008: 38).

Perhaps the most thoroughly favourable consideration of computer games, however arrived in 2011, in the form of game designer and researcher Jane McGonigal's, *Reality is Broken*. In it, McGonigal extrapolated from the current state of the art to predict the positives which lie in computer Gaming's future: 'In short, I foresee games that augment our most essential human capabilities: to be happy resilient, creative…' (2011: 14)[31] In a discussion of the book on the Wall Street Journal blog, McGonigal is, as might be expected, equally positive, concluding with the following point: 'Ultimately, I believe the scientific evidence is clear: The right amount of gaming provokes positive emotions and strengthens social relationships that improve our real lives.' The work now, believes McGonigal, is in deciding exactly what the 'right' amount of gaming is.

Computer Game Studies is currently missing a rich theoretical framework through which the positive effects of play can be explored. Longer accounts in particular have been rather scattergun in their approach – often borrowing from several theoretical sources or having seemingly ad hoc or vague foci. Eglezer, for example, considers the vaguely denoted 'very young' *and* 10-14 year olds (2005:1), with older players not considered, while Kutner and Olsen's team was 'multidisciplinary' (2008: 1) and their research into violent computer games was 'limited to teenage boys *and* their parents (2008:2). While any serious work that attempts to redress the balance of negatively biased publication can only be seen as positive, these works, because of their lack of coherent methodological frameworks, are open to accusations of vagueness or eclecticism.

Here, I suggest the psychological theory of Abraham Maslow as a coherent theoretical framework for exploring positive effects of play. It is important that a psychological theory is selected because the debate over the effects of computer games is both grounded in, and fought upon, territory that belongs to psychology.

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[31] As will be seen in the discussion below, such qualities noted by McGonigal resonate with Maslow's thoughts on self actualisers. The thoughts of Rusel De Maria in *Reset: Changing the Way we Look at Video Games* (2007) also contains parallels to Maslow's: 'we play…to achieve beneficial mental states, to feel empowered and rewarded by successes, to explore fantasies…' (2007: 9).

Having said this, Maslow's theory, while psychological, also allows for a *sociological* understanding of games and their players, as it focuses on the interactions between people and their environments. In other words, Maslow's theory is a social psychological theory. This takes the study of computer games and their players beyond the areas of child development and pathology and this should allow for the possibility of positive effects of computer gaming to emerge. Maslow's thinking, unlike that of the Freudian school which precedes it, focuses on the affirmative. It is premised on the belief that man's nature is essentially good and that man strives to become better, or self- actualised, by having his higher needs met. Man does this by seeking out the beautiful and behaving virtuously. Opportunities to perform such actions are common in many computer games[32] and this may be one reason, in fact, why players - consciously or subconsciously - are drawn to them. Maslow therefore offers some useful conceptual tools for exploring the positive effects of computer game play, and these can be utilised within empirical research with players. Close consideration of the interview data will - ultimately - determine if and how Maslow's theory is useful.

The following section provides a little background on Maslow, outlines his theory, and notes how it may be useful in understanding the psychological benefits of computer game play.

2: Abraham Maslow

Contemporary psychologist Michael Daniels calls Abraham Maslow 'one of the key figures in the larger history of psychology' (2005: 115). Maslow was a Jewish intellectual whose interest in psychology 'was piqued' (Ryckman, 2008: 423) after reading a set of essays by John B Watson, a figure seen as the founder of American Behaviourism (Goble, 1970: 11). Behaviourism is sometimes referred to as psychology's Second Force. The First Force of (Freudian) psychology is based on a pessimistic view of human nature, the view that, in the words of psychologist Frank Goble, 'Man was an animal and only an animal' (Goble, 1970: 4) driven by negative

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[32] Computer game scholar Miguel Sicart discusses such virtuous or ethical actions at length in his book, *The Ethics of Computer Games* (2009).

inner forces. Maslow does not adhere to such a belief, believing that, on the whole, man is essentially good, aspiring to greatness and only becoming anti-social, destructive, or 'sick' when society thwarts such aspirations (Maslow, 1954: 31). The Second Force, then, that of behaviourist psychology as advocated by Watson, initially appealed to Maslow because of its positive aspirations, with this strand of the discipline committed to 'social improvement and the elimination of irrationality and superstition through the pure spirit of science'[33] (Hoffman, 1988: 34). A central tenet of Watson's behaviourist stance is that of malleability, namely that a man's nature is the product of his environment and therefore controlled changes in the latter would produce changes in the former, illustrated by Watson's oft quoted comment: 'Give me a dozen healthy infants…and I'll guarantee to take any one at random and train him to become any type of specialist I might select' (Watson, 1970: xix). However, the birth of his first child challenged Maslow's belief in such a theory and changed his loyalty to this Second Force generally: 'I looked at this tiny, mysterious thing…and felt so stupid. I was stunned by the mystery and by the sense of not really being in control' (Goble, 1970: 12).

Another major factor that influenced Maslow's view of psychology was America's entry into the Second World War, inspiring him to really begin looking at 'the key questions for humanity…what do people really want in life? What do they need for happiness? What makes them seek certain goals? And in more concrete terms, why do they flock to a Hitler or Stalin?' (Hoffman, 1988: 150). These key questions along with Maslow's disillusionment with aspects of traditional behaviourism sowed the seeds of the Third Force, a humanistic strand of psychology that combined elements of the earlier two schools. Maslow - who psychologist Barbara Engler calls, 'the spiritual father of humanist psychology' (Engler, 1995: 349) - felt that '…a comprehensive theory of behaviour must include the internal…as well as external determinants…'[34]

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[33] Maslow co-authored and authored several papers in the area of Behaviourism. The first was published in 1932 (Maslow, A & Harlow, H 'Delayed Reaction Tests on Primates at Bronx Park Zoo' *Journal of Comparative Psychology #14, p.97 - 101*) and the last was published in 1940 (Maslow, A 'Dominance-quality and Social Behavior in Infra-human Primates', *Journal of Social Psychology 11(1940), p.313-324)*

[34] Other key Third Force psychologists include Karl Rogers and Rollo May, though the ideas of others - such as Erich Fromm, and George Mead - also comport with some of those from this humanistic school.

(Goble, 1970: 19). Further to this is Maslow's belief that in order to understand Man's full potential, exceptionally healthy, mature (or self actualised) people need to be studied: 'Any theory of motivation that is worthy of attention must deal with the highest capacities of the healthy and strong person as well as with the defensive maneuvers of the crippled spirits' (Maslow, 1954: 14). This is a departure from both previous schools, with Freud's studies based on his work with largely neurotic patients and behaviourism basing much of its findings on work with animals, specifically primates.

Though much of Maslow's background was in the scientific studies of behaviourism, his early work on this Third Force is, as he readily admits[35], rather subjective and *ad hoc*, with his noting down the characteristics and personality traits of figures he admired (initially, two of his college professors[36]) with a view to discovering what made them so special. He was surprised and excited to discover that many of these figures shared common traits and this inspired him to attempt larger studies.

2.1 *Maslow's Theories of Human Motivation: the Basic Needs*

These early studies inform Maslow's theories of human motivation[37] first widely published[38] in *Motivation and Personality* (1954). Man, argues Maslow, is driven by the desire to satisfy basic needs[39], which he also terms deficiency needs (or D-needs). Maslow notes that although the satisfaction of all basic needs is necessary, some needs

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[35] Maslow noted, 'So far, one man has selected perhaps two dozen people whom he liked or admired very much ...and then tried to figure them out' (Maslow, 1971: 41).

[36] 'These two people were 'Ruth Benedict and Max Werthiemer' (1971: 41-42). The other individuals studied included 'fairly sure historical figures ('Lincoln in his last years and Thomas Jefferson)' and highly probably public and historical figures (Albert Einstein, Eleanor Roosevelt, Jane Addams, William James, Albert Schweitzer, Aldous Huxley, and Benedict de Spinoza)' (1954: 127-128).

[37] As noted by Gambrel and Cianci, Maslow's is *content* rather than *process* theory: 'content theories focus on the factors within the person that energize, sustain, direct and stop behavior' (2003: 143). Process theories, on the other hand, focus on responses to external stimuli. It is also worth noting (from a terminology standpoint) that Maslow's motivational theories - and motivation theories in general - are sometimes referred to as 'personality theories'. Another term is 'Human Scale Development', coined and developed by psychologist Manfred Van Neef (Van Neef: 1991).

[38] An early version of Maslow's theory was first given in a 1942 lecture and published in a 1943 edition of the journal, *Psychological Review* (50), but *Motivation and Personality'* contained the more detailed and developed discussion.

[39] Maslow compares the symptoms brought about by failure to satisfy these needs to 'avitaminosis', symptoms brought about by lack of vitamins (Maslow, 1959: 133).

are greater than others, and arrange themselves, '…in a fairly definite hierarchy on the basis of relative potency' (Maslow, 1954: 57). Maslow notes that it is (usually) necessary for one set of needs to be satisfied before others dominate, a process neatly summarised by historian Roy José DeCarvalho in his overview of humanistic psychology, 'Following Maslow's reasoning, human nature is the continuous fulfilment of inner needs, beginning with basic physiological needs and progressing to meta needs' (1991: 20).
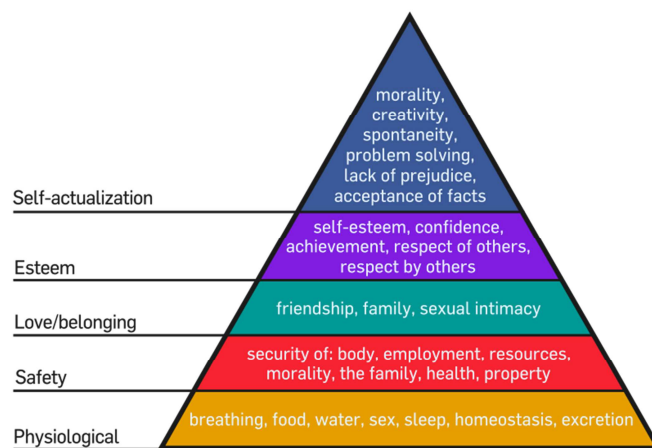
Figure 1: Maslow's theory **as it is most often represented. The first four levels of the pyramid show the basic needs, the fifth and final level shows the higher needs. Image source: Wikimedia Commons**

Maslow's basic needs begin, as noted by DeCarvalho, with the physiological necessities which, while including a need for sex, are largely concerned with food and water. Maslow noted that these needs related to both the concept of homeostasis and research on appetite, homeostasis being the body's need to 'maintain a constant, normal state of the blood stream' (1954: 15). Studies on appetite show that foods people choose to eat are usually a sound indicator of that which the body lacked: 'If the body lacks some chemical, the individual will tend…to develop a specific appetite or partial hunger for that missing food element.' These physiological needs are, according to Maslow, the '...most prepotent of all needs...A person who is lacking food, safety, love, and esteem would most probably hunger for food more strongly than anything else.'

The physiological needs are followed by the safety needs, comprised of: '…security, stability; dependency; protection; freedom from fear, anxiety and chaos;

need for structure, order, law, and limits; strength in the protector; and so on' (1954: 18). Maslow notes that while these needs are as inherently potent as their forebears, for most well adjusted people in a stable society, such needs are easily satisfied and the lack of their satisfaction could usually be found in only a small sample of the populace: 'If we wish to see these needs directly and clearly, we must turn to neurotic or near neurotic individuals, and to the economic and social underdogs, or else to social chaos, revolution, or breakdown in authority' (1954: 18). In addition to these primary safety needs, Maslow also extends his definition to include less physical threats to the individual. This, perhaps secondary, safety need involves both a simple desire for the familiar and a more complex desire for order, '…the very common preference...for the known, rather than the unknown. The tendency to have some religion or world philosophy that organizes the universe and the people in it into some sort of satisfactorily coherent, meaningful whole' (1954: 19).

Next in the hierarchy are the love and belonging needs, which, in the words of Maslow, involve '…giving and receiving affection' (1954: 20). The lack of such affection motivates people towards forming bonds with people: '[An unsatisfied] person will hunger for relations with people in general – for a place in the group or family – and will strive with great intensity to achieve this goal' (1954: 20). Maslow notes that it is this basic need, and in particular the thwarting of its satisfaction, that have received most clinical attention.

Following the love and belonging needs are the esteem needs, which involve self worth, or esteem, and the esteem of others. As regards the first of these, Maslow notes that it involves, 'the desire for strength, achievement, adequacy, mastery and competence, confidence in the face of the world, and independence and freedom.' The second, he says, is a desire for, '…reputation or prestige…status, fame, and glory, dominance, recognition, attention, importance, dignity, or appreciation.' Maslow also stresses the importance of self-esteem originating from the 'deserved respect' (1954: 22) from others and this comes as a result of 'will power, determination and responsibility' (1954: 22) rather than from 'external fame' or by others' appreciation of something which comes too easily to the subject.

Maslow notes that social and environmental conditions need to *allow* for these basic needs to be satisfied: '…without them, the basic satisfactions are quite impossible, or at least severely endangered' (Maslow, in Goble, 1970: 44). These conditions are: '…freedom to speak, freedom to do what one wishes as long as no harm is done to others…freedom to defend oneself, justice, fairness…orderliness' (Maslow, 1954: 22).

2.2 *Maslow's Theories of Human Motivation: the Higher Needs*

Though Maslow, in both *Motivation and Personality* and beyond, offers exceptions to the order of the hierarchy and minor additions to it, the first significant developments were published in *Toward a Psychology of Being* (1962). Here, Maslow details the meta-needs, needs that arise after the basic needs are satisfied and derive from his work with 'self-actualising' people, people who regularly experienced what Maslow terms peak experiences - 'moments of highest happiness and fulfilment' (Maslow, 1962: 85). Such people are no longer D (deficiency) motivated. These needs therefore differ from the needs of the original hierarchy in that they are motivated by a need for growth or for 'being' rather than a need to avoid deficiency: 'I call it Being-psychology because it concerns itself with ends rather than means' (Maslow, 1962: 85). These needs therefore are often referred to as growth needs, meta-needs or Being values. In the words of psychologist Michael Daniels, 'although Maslow did not originate the term or concept[40], interest in this field derives largely from his work' (Daniels, 2005: 115). Maslow notes that unlike the D-needs, these needs were not hierarchical: 'They are not separate or distinct, but overlay or fuse with each other.' (1963: 94). Maslow describes this element of his hierarchy as a need for people to fulfill their own potential and, in accounts of his work, this concept is often illustrated with the following quotation: 'Musicians must make music, artists must paint, poets must write if they are to be ultimately at peace with themselves. What humans *can* be, they *must* be. They must be true to their own nature' (1954: 22).

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[40] The term, 'self actualisation' was, in fact, originated by Kurt Goldstein, something acknowledged by Maslow in *Motivation and Personality* (1954: 22).

The growth needs, identified 'as far as [Maslow can] make out' (1963: 93) is presented as a fourteen part list - included as an appendix (appendix 1) - of what might be described as key themes. Each of these key themes (including wholeness, richness and playfulness) is then synonymised numerous times, as if by doing so, Maslow can better tease out the nuances in an attempt to understand them fully himself. Indeed, the list can read like Maslow showing his working, writing and rewriting to try and reveal the key to personal growth. For instance, the key theme of wholeness is presented as follows: 'Wholeness; (unity; integration; tendency to one-ness; inter-connectedness; simplicity; organisation; structure; dichotomy-transcendence; order)'. There is a sense that this was intended as an organic work in progress.

While not including them formally as part of his hierarchy, but discussing them in terms of both basic and higher needs, Maslow also discusses two other categories; the cognitive needs, and the aesthetic needs. As they are psychological rather than physiological, and have clear echoes in Maslow's fourteen part list, these best fit into Maslow's category of 'growth needs' and so are discussed here. As will be seen below, these needs in particular, are well suited to satisfaction through computer game play. While Maslow was aware that very little clinical work had been done directly in the area of cognitive needs, his work with animals, noted earlier, and his own human subjects led him to believe that such a need clearly exists and is 'a species wide characteristic' (Goble, 1970: 43). Maslow notes that the cognitive needs themselves form their own hierarchy of pre-potency, consisting of '…a desire to understand, to systemize, to organize, to analyze, to look for relations and meanings, to construct a system of values' (Maslow, 1954: 25). As with the cognitive needs, Maslow notes a similar lack of research in the area of aesthetic needs, but again believes that such a need exists in 'at least some individuals' (1954: 25). If the need remained unsatisfied, such people become ill: 'They get sick (in special ways) from ugliness, and are cured by beautiful surroundings; they crave actively, and their cravings can be satisfied only by beauty' (1954: 25).

In his posthumously published collection of papers *The Farther Reaches of Human Nature*, Maslow argues that it is these growth needs that are required for a person to achieve self-actualisation and are often attained by people involved in a

worthy, selfless cause, '…outside their own skin, in something outside themselves' (Maslow, 1971: 42). In the same book, Maslow gives perhaps the clearest and certainly the most concise definition of something he terms peak experiences: 'Peak Experiences are transient moments of self actualization. They are moments of ecstasy…' (1971: 46). This may therefore be understood as moments when one or a combination of the higher values is keenly or wholly felt by an individual.

Towards the end of his career, Maslow added the notion of the plateau experience. The plateau experience, argues Maslow, is less intense and longer lasting than the peak experience and can be brought about consciously. To illustrate it, Maslow provides the example of a mother looking at her baby, calling such a thing, '…a very pleasant, continuing, contemplative experience rather than as something akin to a climactic explosion which then ends' (Maslow, 1971: 335).

2.3 *Maslow's Theories of Human Motivation: the Fourth Force*

Being values and the notion of the peak experience are at the heart of the (final) area of Maslow's work that can be loosely termed the 'spiritual' and which eventually formed the core of what came to be termed Transpersonal Psychology, or The Fourth Force. Maslow believes that the peak experiences - experienced by most people at some point in their lives and by self-actualisers regularly - are essentially the same as those revelations experienced by the originating prophets of all well established, organised religions, just stripped of the accompanying hyperbole: 'That is to say, it is very likely, indeed almost certain, that these older reports, phrased in terms of supernatural revelation, were, in fact, perfectly natural, human peak experiences…'(Maslow, 1964: 20). Maslow believes that organised religion consists of the peaker (the original prophet) and the non-peaker (the ecclesiastic). Organised religion is often therefore, believed Maslow, without value. Not only do non-peakers attempt to explain the peak-experiences to other non-peakers, but they also make sacred the symbols of the original vision, rather than the meaning of the experience itself:

> …this is simply a form of the idolatry (or fetishism) which has been the curse of every large religion. In idolatry the essential meaning gets so lost in concretizations, that these finally become hostile to the original mystical experiences… (1964: 24)

Maslow believes the true, valuable spiritual or religious experience to be wholly personal, unique to each peak-experiencer: 'From the point of view of the peak-experiencer, each person has his own private religion, which he develops out of his own private revelations in which are revealed to him his own private myths and symbols, rituals and ceremonials, which may be of the profoundest meaning to him personally and yet completely idiosyncratic' (1964: 28).

From Maslow's interviews with non-theistic subjects, he notes that they have more religious experiences than those involved in traditional organised religions. Maslow concludes that, for most people involved with organised religion, such a tie allows them to strongly 'religionise' one aspect of life (attendance at church etc.) but 'dereligionised' or secularised the rest of it. Most self-actualising or 'serious' people, as Maslow terms them, can have 'core religious' or 'peak' experiences at any time: '…transcendent experiences seem to occur more frequently in people who have rejected their inherited religion and who have then created one for themselves (whether they call it that or not)' (Maslow, 1964: 123).

3: Maslow and the Computer Game

Two related concepts provide the key to understanding how the computer game may satisfy Maslow's needs (henceforth referred to as Maslovian[41] needs). First is the concept that there should be the *possibility* for a need to be sated: 'On the whole, we yearn consciously for that which might conceivably be actually attained' (Maslow, 1954:12). While initially relating such a yearning to the more physiological of the basic needs, later writings imply that such yearnings include the meta-needs. Similarly, Maslow later notes- in *The Farther Reaches of Human Nature* - that, at least as far as

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[41] This term is being used as it is the one preferred by most commentators and was also recognised by Maslow's widow, Bertha: 'It is already [by 1972] being referred to by many as Maslovian Psychology' (1972: 27).

peak experiences (a 'transitory' flooding of the senses as a result of growth need satisfactions) are concerned, it is sometimes possible for a person to create circumstances that are likely to lead to them: 'One can set up the conditions so that peak experiences are more likely' (1954: 47). It is my contention that engagement in certain computer game types may be seen as setting up such conditions.

The second important concept in this understanding is that of *immersion,* a notion initially emerging from literary theory and later adopted, adapted and significantly extended by scholars of computer games and virtual reality. Immersion theory – alluded to in the discussion of play theory below and discussed in greater length in chapters two and five - considers the possibility of virtual worlds becoming tangible or 'real' for those who engage with them.

This thesis is interested in whether computer games do offer the possibility of Maslovian needs being met, or, to put it another way, whether Maslow's categories offer an approach to the question of player motivations and an understanding of why people play computer games. These possibilities will be explored using empirical research methods never adopted by Maslow. It is useful at this point to discuss the key areas of research, and this is done below, starting with basic needs and concluding with the higher needs.

3.1 *The Basic Needs and the Computer Game*

The basic needs which seem likely to find some satisfaction in computer game play, are those connected to the concept of 'esteem'. The computer game may well allow for the satisfaction of both elements discussed above (self worth and the esteem of others). It seems obvious that the computer game's risk/ reward structure allows for this, the basic logic being as follows: the more a player becomes competent at a game, the greater their reward and the greater their sense of self-esteem (and feeling of *mastery*, to use a Maslovian term). As will perhaps become more apparent through the discussions of games and their structures in the next chapter, most computer games - even including those from the earliest days of the form - facilitate this to some degree, and games with incrementally increased challenges and appropriately correlated and scaffolded rewards

allow for it even more. Perhaps the most striking examples of these are Role Playing Games (or RPGs), particularly the more recent offerings such as the *Fable* (Microsoft, 2004-) and *Mass Effect* (Microsoft, 2007-) series, with actions and achievement linked extremely closely to player-character (or avatar) growth. There also seems the possibility of esteem needs being met through gaming culture - meetings at Internet cafes, attendance at cosplay[42] conventions and the like. Similarly, esteem needs being met via online play seems likely, though at the time of the thesis' design, this aspect of gaming culture was in its infancy.[43] The likelihood of esteem needs being met through computer gaming would, perhaps, be even higher were the practice more culturally esteemed. Computer gaming does, at present, however, have a relatively low social status, with an *Edge* magazine editorial noting a mass media viewpoint which 'focuses on the irrelevance of gaming: its absolute futility; its absurdly one-dimensional subject matter; its inability to offer anything approaching cultural worth (*Edge,* #190: 3). This negative perception - even stigmatisation - of games and gamers by wider society implied in the comment from my interviewee, Daniel:

> Some people, I think, when they get to a certain period of life are like, 'Oh no, I don't play games - I like football and cars.' I'm not afraid to say I'm a gamer. Whether people think I'm sad, that's their call. (Daniel: 2)

The increase in popularity of professional gaming tournaments[44], however, may see a proportionate increase in computer gaming's wider acceptance, with skilled computer gamers receiving the amount and type of praise currently enjoyed by professional players of traditional sports.

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[42] Cosplay is a word derived from a meshing of the words *costume* and *play*. In the words of cosplay expert Robin E Brenner, 'It is the creation and display of costumes representing favourite characters from Manga, Anime and computer games.' (Brenner, 2007:295) Cosplay is also often a social event, with 'cosplayers' attending cosplay conventions and entering competitions.

[43] The original uptake for Microsoft's online game service, *Xbox Live*, for instance, which was launched in 2002, was a reported 250,000 (http://games.ign.com/articles/381/381618p1.html). By 2011, the figure had risen to an approximate 20 million. (http://www.engadget.com/2009/05/28/microsoft-touts-30-million-xbox-360s-sold-20-million-xbox-live/).

[44] The most commonly used term for professional computer gaming is Electronic Sports, and this year saw the first academic book dedicated to the topic, T.L. Taylor's *Raising the Stakes*. This may be seen as a sign of electronic sports' growing popularity with Taylor noting that, 'The World Cyber Games (WCG) one of the largest and most influential e-sports tournaments' has 'grown significantly since its first trial event in 2001' (Taylor, 2012: 22).

The thought of many *physiological* needs being met through computer game play or computer game culture, however, seems unlikely, as does the meeting of the safety need. Conversely, some satisfaction of the belongingness and love need does seem a little more possible, perhaps through player identification with in-game characters, through the nurturing of virtual pets (originated by Bandai with their Tamagotchi toys and evolved through their *Digimon* (1999-), and Nintendo's *Pokémo*n (1996-) series of games) or perhaps though online or local multiplayer gaming.[45]

3.2 *The Higher Needs and the Computer Game*

As regards player satisfaction of higher needs through computer game play, the possibilities are much more apparent than with the basic needs. This is because higher need values are embodied in most computer game worlds, which are often beautiful and challenging; they allow for autonomy, exploration and spontaneous acts. In addition, almost all of them task the player with restoring order or justice, *The Legend of Zelda* (Nintendo, 1986-) series being just one example of where this is so.

The challenge structure of computer games, for instance, may provide the opportunity to satisfy the cognitive and esteem needs. While the most immediately evident type of game that may allow for this is the discrete puzzle game exemplified by the likes of *Tetris* (Nintendo, 1989), *Bejewelled* (PopCap Games, 2001) and *Columns* (Sega, 1990-)[46] , the cognitive needs - as Maslow noted - do not simply involve abstract problem solving, but the need to satisfy curiosity and for 'systemizing the universe' (Maslow, 1954: 23). Therefore, adventure game series such as *Tomb Raider* (Eidos Interactive, 1996-) *The Legend of Zelda* (Nintendo, 1986-) and, more recently, *Uncharted* (Sony Computer Entertainment, 2007-), may allow for some satisfaction of this need. In such pieces, the player is often presented with an initially forbidding environment (seemingly impenetrable tombs or unreachable platforms) in an apparently chaotic and dangerous gameworld. This is exemplified in figure 1, which shows a screen

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[45] For reasons noted in the methodology chapter, chapter three, however, this thesis is only considering the single-player computer game.
[46] All of these games fall into the category of Pattern Recognition, or *games of order*, to use game scholar Johan Huizinga's term.

from Sony's *Uncharted 3* (Sony Computer Entertainment, 2011). The objective may be fairly clear- to reach the far platform - but the means of achieving it are less so. Using past gaming experience in general, understanding of the behavioural properties of objects in this game specifically[47] and general reasoning, the player must decide which objects will aid safe passage. Here, the judicious use of broken beams, wall panels and chandeliers will achieve the objective.

Figure 2: Screenshot from Sony's *Uncharted 3*. Cognitive satisfaction may be achieved from solving the problem of how to reach the far platform. Image copyright: Naughty Dog and Sony Computer Entertainment.

Cognitive satisfaction and a resulting sense of self- esteem may be gained through the successful application of logical thinking, by looking '… for relations and meanings' (Maslow, 1954: 25) between the various phenomena of games' virtual spaces.

Also, the need for beauty could possibly be met (at least partly) by the computer game, as the form is, after all, a primarily visual one. While it is likely that visuals have been part of the computer game's appeal since the dawn of the medium - with the line graphics of the earliest games such as *Spacewar!* (Freeware, 1962) and *Pong* (Atari, 1972) providing a simple but elegant beauty for the players - the likelihood increases with the each new iteration of processor.[48]

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[47] This is players' understanding of what game scholar, Miguel Sicart terms, 'simulation rules' (2009: 34), or the physics of the objects in the virtual space which may or may not mirror real world ones. The wooden beams in the *Uncharted* example above, for instance, may or may not be as strong as their real world equivalent. Knowledge of the simulation rules is often gained through trial and error, or by a practice game theorist John Paul Gee terms, 'probe, hypothesise, reprobe, rethink cycle' (Gee, 2008: 90) which is discussed in chapters four and five.

[48] While initially it may seem that not all game types will be capable of satisfying Maslovian needs, on closer reflection, this may not be so, as most games offer attractive graphics and challenge etc. Games

Finally, there are the notions of self- actualisation which could be achieved and experienced through engagement with the computer game. While it may be fanciful to assume that long term self-actualisation may be achieved solely through computer gaming, as self-actualisation can not be achieved through a single activity alone, it is absolutely feasible to suppose that engagement may make a significant contribution to it. Similarly, if computer games allow for the possibility of the above values to be experienced, it follows that the all consuming, intense rush of such values that is the peak experience may also be experienced, as well as the longer, calmer, plateau state.

3.3 *Criticisms of Maslow*

There are numerous criticisms of Maslow's theories. A common criticism is that the work is too subjective: '…that it was merely the product of his own mind, that it was nothing more than his own private notion of what constitutes an ideal person' (Lowry, 1973(a): 39). The core of this condemnation clearly arises from the unscientific means by which Maslow first chose and then analysed the historical figures and other self-actualising people on whom he bases much of his early theory.

A similar criticism is Maslow's lack of research data, as noted by Michael Daniels: 'Maslow does not specify in sufficient detail how either criterion [negative and positive personalities, or self actualisers and non self actualisers] was assessed' (2005: 120). This is something that was noted as early as 1976 in a paper by psychologists Mahmoud Wahbda and Lawrence Bridwell: 'It has almost become a tradition for writers to point out discrepancies between the popularity of the theory and the lack of clear and consistent empirical evidence to support it' (1976: 212). Maslow's lack of empirical data is something that continues to niggle, albeit almost always from conservative intellectuals. For instance, in a 1988 book, *Psychology as Religion*, psychologist Paul

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which contain larger virtual playspaces however, will offer *more* opportunities for need satisfactions than those which do not. Games from the earliest days of the form, for instance, were often single screen affairs (such as *Space Invaders* (Taito, 1978), *Pacman* (Namco, 1980) and *Galaxian* (Namco, 1979), offering no narrative to speak of, few collectibles, useable objects or areas of beauty. These properties are most likely to be found in games released for Nintendo's *NES* console (discussed in the next chapter) and all platforms afterwards.

Vitz uses this perceived poverty of data to disregard almost all of Maslow's work (1988: 38-40). Most recently (2006) Christina Hoff Sommers and Sally Satel, in their book, *One Nation Under Therapy* also dismiss Maslow's theory in its entirety for the same reason. Another common criticism is the one voiced by Social Psychologist Geert Hofstede, who, for instance, argues that Maslow's theory is highly individualistic, failing to take into account needs of those living in more socialist, or collectivist, societies: 'Maslow's hierarchy', he argues, 'reflects individualistic values, putting self actualization and autonomy on top. Factors prevalent in collectivist cultures, such as 'Harmony' or Family Support' do not even appear in the hierarchy.' This concern is echoed by Elaine Pearson and Ronald Podesci (1999) and Patrick Gambrel and Rebecca Cianci (2003).

While not making them any less valid, Maslow was keenly aware of these criticisms: 'My own investigations began as a prescientific or non-scientific activity....' (1970: 42) and 'By ordinary standards of laboratory research i.e., of rigorous and controlled research, this simply was not research at all' (1970: 42). Maslow saw much of his work as asking questions and opening up areas of research rather than providing definitive answers: 'The conclusions are in the realm of prescience, but the affirmations are set forth in a form that can be put to test. In that sense, they are scientific' (1970: 42). Undeniably, this is how Maslow's work has predominantly been used. In particular, his concepts have been successfully operationalised to research questions of motivation and needs in *social contexts*. This is illustrated by the fact that Maslow's theory has always been valued and utilised in business environments and has worked very well, something evidenced by his invitation to work with electronics manufacturers, Non-Linear Systems, Inc., 'in the summer of 1962' (1965: viiii). Maslow's account of this time was later published, in 1965[49], as *Eupsychian[50] Management: A Journal*. Perhaps because of this publication, his work became even more widely recognised and used in

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[49] This book was later republished in 1998 - with additional material from then current management theorists and practitioners - as *Maslow on Management* (John Wiley and Sons).

[50] Eupsychia, is something of a corrupted portmanteau word from Utopia and Psychology created by Maslow himself: 'I've coined the word Eupsychia and defined it as the culture that would be generated by 1,000 self-actualizing people and defined it as the culture that would be generated on some sheltered island where they would not be interfered with.' (1965: xi). In such a place, in such conditions, argued Maslow, it would be possible to see exactly *how* good humans could become.

this field. Indeed, in the words Wahba and Bridwell, '[Maslow's theory] has become one of the most popular theories of motivation in the managerial and organisational literature' (1976: 212). Writing in 2007, business theorists Dennis O' Connor and Leodones Yballe noted that 'All OB [Organisational Behaviour] textbooks have a motivation chapter that includes a brief section on Maslow's Hierarchy of Needs, a chart depicting the upward progression of those needs and a useful set of tips for motivating employees' (2007: 739).

The way Maslow has been used in such social, business, environments is how I approach him primarily in this thesis; by using his need categories as a set of operational tools to explore the *social* psychological aspect of computer gaming. Nevertheless, it is still important to address the criticisms in regard to Maslow's work, beginning with that of subjectivity. The weakness of subjectivity as a theoretical approach is obvious: in using his own definition of an ideal, self-actualising person, Maslow's conclusions were all but determined from the start. I, however, am not choosing what I see as self-actualising people, but rather dedicated computer gamers and, through the process of investigation, determining whether or not they are satisfying basic and higher needs. Maslow's theory being individualistic is also recognised, but countered here by my research using his concepts to consider computer gamers and their pastime in their wider social and cultural contexts. Finally, this research will not suffer from Maslow's 'lack of clear and consistent empirical evidence' (Wahba and Bridwell, 1976: 212): empirical investigation - in the form of interviewee testimony - will be at the heart of the thesis. With this approach it will be possible to discover how accurate and useful the categories of need are and, ultimately, how valuable they are as a theoretical guide for Computer Game Studies. Such discoveries are expected to be made throughout the period of empirical period research and data analysis and will be discussed in the related chapters (four and five) and in the thesis' conclusion.

4. Developmental Psychology

While Maslow's work provides the theoretical backbone to this thesis, it is worth bearing in mind some other thinking which is also useful in helping us to understand the

social psychological benefits and prosocial effects of computer games. The work of Bruno Bettelheim, Jean Piaget and Donald Winnicott is especially valuable in this regard, particularly when considered in relation to the type of story which predominates in some genres of computer games, including the *Zelda* series: the folk, or fairy, tale.

The fairy tale has been an area of discussion for psychologists since the birth of the discipline. Psychological work on the fairy tale began, arguably, with Freud (1913) and continued to be developed by others in the field, perhaps most notably Jung (1991). The most relevant thinker here, however, is Bruno Bettelheim, who argues that fairy tales perform a particularly meaningful purpose for children, including feeling a Maslovian 'sense of selfhood and self worth' (Bettelheim, 1976: 6). According to Bettelheim, these seemingly simple, accessible stories allow children to experience and work through their unconscious real-life fears symbolically and therefore safely, without trauma, as articulated below:

> Psychoanalysis was created to enable man to accept the problematic nature of life without being defeated by it or giving in to escapism. Freud's prescription is that only by struggling courageously against what seem like overwhelming odds can man succeed in wringing meaning out of his existence. This is exactly the message that fairy tales get across to the child: that a struggle against severe difficulty in life is unavoidable...but if one does not shy away, but steadfastly meets unexpected and often unjust hardship, one masters all obstacles and at the end emerges victorious. (1976: 8)

It is worth noting that such a thought resonates with Bettelheim's notion of play, discussed in his later work, *A Good Enough Parent*, again reinforcing the idea of play being inherently valuable:

> Play permits the child to resolve in symbolic form unsolved problems of the past and to cope directly or symbolically with present concerns. It is also his most significant tool for preparing himself for the future and its tasks. (1987: 170)

As will be seen in chapter four, most of my interviewees discovered computer games, including the *Zelda* series when they were young children, and its fairy-tale story may have appealed to them for the same reason noted by Bettelheim. The difference with the players of games and the readers of tales being, of course, one of closeness: in playing a computer game fairy-tale, the child is immersed and engaged in the role of protagonist,

rather than a spectator[51], with the potential psychological effects of mastering obstacles and becoming victorious being especially powerful. The relevance of Bettelheim's theory to the computer game and its players is also recognised by digital technology scholars Jacquelyn Ford Morie and Celia Pearce. In their paper, 'Uses of Digital Enchantment: Computer Games as the New Fairy Tales' they argue that children are not reading as much as they once did ('kids read less, or if they do read, the books are rarely traditional fairy tales' (2008:10)) nor accessing the traditional spaces where they would once enact their own fairy tales. They have either disappeared or are being denied to them by anxious parents. As a result, argue Morie and Pearce, the computer game fairy tale serves the same purpose as the traditional one once did, namely fulfilling 'a similar and vital role in providing today's children a sense of ritual and power in their own hero's journey from child to adulthood' (2008:10). Morie and Pearce identify *The Legend of Zelda* series (along with other popular computer games such as *World of Warcraft* (Blizzard Entertainment, 2004) and *Shenmue* (Sega, 1999)) as containing typical fairy tale tropes.

The work of developmental theorist Jean Piaget has also been used in regard to the fairy tale. Educationist, F. André Favat argues that such stories appeal to children during what Piaget terms the pre-operational stage of development, which usually occurs between the ages of two and six[52]. This stage, argues Piaget, is characterised by 'magical thinking' (defined by psychologist - and Maslow scholar -, Brent Dean Robbins as a belief that '…everything, including what we commonly regard as inert material objects, are alive, possessing an indwelling spirit' (1999: 3). It is also characterised by egocentricity. The world of fairy tales mirrors the magical one that the child is creating through magical thinking, while the central role of the characters mirrors their egocentricity. The simple moral world presented in such stories - good triumphs over evil - also appeals to the child's sense of justice, or in the words of Favat, 'Correspondences exist between the moral system that children maintain in their world and the moral system that exists in the world of the fairy tale' (1977: 32). This

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[51] This notion of the player protagonist is emphasised in the next chapter through game scholar Barry Atkins' identification of the player as co-writer.
[52] The other stages are discussed below.

identification with the worlds and characters of the fairy tale benefits the child's development. Again, as noted above regarding Bettelheim's theory, the deep involvement demanded by computer game fairy tales has the possibility of making the lessons learned even more powerful and beneficial.

Figure 3: The final screen from *Ocarina of Time.* **Link saves the princess and so saves the world. Such moral simplicity appeals to the child player. Image Copyright Nintendo**

Computer games and their players also have other associations with the developmental theory of Jean Piaget**,** specifically his theory of intellectual development. Piaget's theory is comprised of five stages, moving from the highly egocentric 'sensori-motor period' usually lasting for the first two years of life, to the 'period of formal operations' typically reached around the age of sixteen. It is the first stage that is most relevant here. In this first stage, the baby has no real sense of the world outside of himself. Instead he has, '…a number of sensori-motor systems which can receive sensations arising from within his body and from the immediate surroundings to which he can make certain limited responses' (1970: 8). The baby does things such as suck and grasp at items and objects within his reach. From the responses he receives, he modifies his behaviour. An example given by Piaget expert Peter Richmond concerns the 'suckable properties' (1970: 8) of the bottle, thumb or pillow, all objects typically within a baby's radius.

This 'sensori-motor' stage play of sucking, grasping and banging can very much be compared to the player entering the world of a new computer game. Of course, the player has cultural cues and other worldly experience denied to the baby, but unlike

other aspects of everyday life, in the computer game everything else is new and exciting.

Finally, from the area of developmental theory, it is worth being aware of the work of Donald Winnicott, on play and on transitional objects, both of which may have relevance to the player of computer games. Donald Winnicott identifies the importance of play in several areas, and this was noted by Winnicott scholar Adam Phillips, who writes: '[For] Winnicott, the capacity to play was integral to the developmental process...the capacity to know oneself' (1988: 144). Indeed, in the words of Winnicott himself, '…through play and shared playing, a rich cultural experience and enjoyment of true creativity will be will be open to [children]' (Winnicott, 1971: 176). As regards transitional objects, Winnicott describes these as objects ('…teddies and dolls and hard toys…' (Winnicott, 1971: 4)), as being embraced by the child in the transition period between complete reliance on the mother and relative independence in the world. They are something with which to bridge and ease the move. While - as will be seen in the discussion of interview data - computer games are often acquired or played at an older age than would be usual for acquiring traditional transitional objects (the typical age is 'at about four to eight to six to twelve months' 1971: 4), they can be seen as an evolved form of transitional object which help to ease the transition from one part of childhood to another, or from late childhood to early adulthood. As computer games have both childlike and adult properties (fantasy worlds on the one hand and rules on the other), they certainly seem reasonable candidates for such objects.

Conclusion

In this chapter, I have argued that computer games have often been treated negatively by academia and noted several studies which have concluded that some games have antisocial effects. Games, say such studies, may 'cause players to harm another person' (Greitemeyer; McLatchie 2011: 661) and their negative effects may 'persist long after the game has been turned off (Bushman; Gibson 2011: 31). I have contended that despite the fact that there are *some* works which conclude the opposite, Computer Game Studies is currently missing a framework within which prosocial effects can be

recognised and offer the theory of Abraham Maslow as a solution to this. I argue that Maslow's theory is a psychological theory that can be used *socially* to determine positive effects of computer game play. I have outlined Maslow's theory and provided an understanding of which prosocial and psychological benefits are most likely to be found through the playing of computer games: self esteem, cognitive need realisation and the higher need of self-actualisation. I have also suggested how the playing of computer games may allow for this. I have acknowledged the key criticisms of Maslow's work – its subjectivity, individualism and lack of empiricism and argued that such shortcomings will not be reproduced in this empirically grounded work which has interviews with real computer gamers at its heart. Finally, I have situated Maslovian need realisation within the work of key developmental psychologists, Bruno Bettelhiem, Jean Piaget and Donald Winnicott, and argued that the types of story and play found in computer games engenders the type of healthy growth detailed in their theories. Such a social psychological understanding of computer games can be further illuminated by a consideration of games and their role in culture, and this is the subject of the next chapter.

Chapter Two

The Computer Game

Introduction

By the early 1980s, the computer game industry had enjoyed its first great flush of success, both in the arcades - most famously with titles such as Taito's *Space Invaders* (1978) and Namco's *Pacman* (1980) - and in the home, with Atari's *VCS* games console, released in 1977. It had also suffered its first great setback, with what has come to be known as The Videogame Crash[53]

Awareness of this background is helpful in understanding Nintendo's and *Zelda*'s place in computer game industry and culture. Simply put, Nintendo - a company which began life creating playing cards at the end of the 19th Century[54], and who dabbled in the electronic game market in the 1970s[55] - saw a business opportunity in the vacuum left by Atari and others involved in the crash and understood the problems which had led to their fall. Nintendo released its first game console in 1983 and 1986 in Japan and North America respectively,[56] initially created just a handful of games and tightly controlled the amount of units available for purchase (Donovan, 2010: 168).[57] This, along with other aggressive marketing techniques (something David Sheff terms a 'scorched earth policy' (1993)) allowed Nintendo to be viewed as saviours of the computer game industry, although, of course, their motivations were undoubtedly

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[53] Most commentators on the industry attribute this financial downturn to a number of reasons, not least the oversaturation of the market, in particular oversaturation with inferior games: '…a combination of bad product, aging consoles and poor management' (Kerr, 2006: 17).

[54] Nintendo was formed in 1899, 'by Kyoto businessman Fusajiro Yamauchi, as Nintendo Koppai.' (Kohler, 2004: 27).

[55] These electronic games include 'Beam Guns', 'Laser Clay Ranges' and 'TV games' (Kohler, 2004: 29).

[56] The Nintendo *Famicom* (a contraction of Family computer) was released in July 1983 in Japan (Kohl, 2005: 55). The same machine was later rebranded and re-launched for American and European markets in February 1986 (Herman: 114), as the *NES* (*Nintendo Entertainment System*).

[57] Presumably in order to retain quality, Nintendo games have historically had a comparatively long development period, something often commented on by industry observers. Questions over *Ocarina of Time*'s delayed release led its designer Shigeru Miyamoto to say, 'A bad game is bad forever, a delayed game is eventually good'. *http://www.miyamotoshrine.com/theman/interviews/*

financial rather than altruistic. In the words of computer game scholars Ian Bogost and Nick Montfort, 'Without Nintendo's leap, the retail videogame market might not have recovered from the 1983 downturn' (2010: 134).[58]

It is also worth noting here that Nintendo's first games console was marketed as a family product, with special emphasis on the family's children, something implied in Nintendo's early marketing and clearly stated in 1990 by Peter Main, then Vice President of Nintendo's US subsidiary, Nintendo of America:

> The positioning of our company has been one of total family entertainment, that we initially got to by going after boys 8 to 15[59] (Quoted in Provenzo, 1991: 14).

The relevance of Nintendo's focus on family values to the experiences of my interviewees will become apparent in chapters four and five.

The Legend of Zelda, the first entry in the *Zelda* series, was first released in Europe and North America in 1986, and, along with the *Mario* platform games, became one of Nintendo's best selling and well known titles. *Zelda*'s most important contribution to the form[60] is a four-way-scrolling screen, which displays a birds-eye view of a pastoral world. Via the use of a symbolic map - similar to those seen on a crude GPS display - players are gifted an awareness of the larger geography they - in the form of their player avatar, Link - can traverse.[61] To put it another way, '…when you have Link walk off one side of the screen, he appears on the other side of a new screen

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[58] *Edge* magazine provides a longer term view of Nintendo's achievements, calling them '…the most consistently successful games company since the industry began' (*Edge* 169: 68).

[59] Such a statement is supported by the ratings given to the majority of early (1990s) US Nintendo games software. Much of it gaining an 'E' (Everyone) rating by America's *Entertainment System Rating Board* (ESRB), a voluntary industry watchdog created in 1994. Products with this rating are deemed suitable for those aged six and over and may feature only 'minimal cartoon, fantasy or mild violence'. Tellingly, at the time of writing, the charts which relate to Nintendo's two then current consoles (the *DS* and *Wii*) contain only games rated below 15. http://www.ukie.info/content/ukie-reveals-best-selling-video-games-2010 (Retrieved 12 April 2011)

[60] Apart from the replication of single elements such as four way scrolling, the template offered by *Zelda* is rarely copied. *Edge* magazine theorises that this is down to *Zelda*'s richness: 'You can copy it, but it's such a daunting, demanding job that the only people able to tackle it are those capable enough to pursue their own visions instead' (*Edge,* #169: 70).

[61] A game from the first wave, or 'golden age' of computer games - *Defender* (Williams Electronics, 1980) - did this first, but on the X axis only.

in another part of the large virtual space' [62] (Bogost in Montfort, 2010: 4). This was the first time a game presented such a large, instantly accessible, virtual space.[63] Moreover, this space is highly interactive, filled with objects and areas that may be used and explored in a relatively intuitive or organic way.[64] Within this virtual world, the player is given tasks to complete. This basic template has remained in place since this first entry, being iteratively evolved over numerous instalments. *Ocarina of Time* (1998)*,* the fourth game in the series - and the game at the heart of this thesis - is especially interesting as it embodies not only the innovation of the large virtual space noted above, but also three dimensions[65]. Contemporary reviews note the successful - even triumphant - integration of the two:

> ...it retains the essence of what makes the Zelda experience unique- an intoxicating blend of exploration, action, puzzle solving and storytelling now fused with state of the art visuals. It's Zelda all right, but with a new level of creative and technical ambition. (*Edge*, #66: 71) [66]

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[62] This large virtual space of the computer game – or virtual playspace- is discussed in some detail towards the end of this chapter. I argue that this space is part of that which makes the computer game unique.

[63] Thematically similar to *Zelda*, Role Playing games (RPGs), such as *Dragon Quest* (Enix, 1986) and The *Final Fantasy* Series (Square, 1987) which interviewee, Dean, for instance, discusses in chapter four, also present a large world. Unlike *The Legend of Zelda*, however, the entire world of these games is not accessible to the player, with instead only the illusion of access being granted, with very little interaction available. The creator of the *Legend of Zelda* series, Shigeru Miyamoto frowns upon such limitations, and his comments shed light onto the thinking behind *Zelda's* design, the design which is highly praised by the interviewees: 'I personally have a fundamental dislike of the RPG system. I think that in RPGs, you are completely bound hand and foot and can't move. Only gradually, as your character gains powers, do you become able to move your hands, your feet…you come untied slowly. I don't think that is a game that is *fundamentally* fun to play' (Miyamoto in Kohler, 2005: 88).

[64] Unlike the 'adventure' type games which preceded it, there is no specific order in which to explore the first instalment of *Zelda;* almost its entire world is instantly available. Some of the more difficult dungeons are available at the same time as easier ones, for example, should the player wish to attempt them. Those sections which are not accessible are inaccessible for a reason – a ladder needs to found, for instance – and can stimulate procedural questions in the mind of the player. This is something commented upon by my interviewees in chapter five.

[65] It must be noted here, that *Ocarina of Time* on the *Nintendo 64* is not true 3D, in the sense of it being an anaglyphic of holographic- or similar- image. It instead utilises three dimensional images created through the use of polygonal computer graphics. This is sometimes called pseudo 3D or even 2.5D. When my interviewees refer to 3D games in the chapters four and five, this is the type they are referring to.

[66] *Edge* - on the surface, simply a consumer magazine - is referenced perhaps more than is expected in an academic piece. This is due to the high regard in which the magazine is held by both game players (including my interviewees) and within Computer Game Studies. Computer game scholar, Dianne Carr refers to it as, '…a respected UK games magazine' (Carr *et al*, 2006: 174). Several of its observations on

The computer game industry has continued to bloom since Nintendo entered the market, and, while reports vary as to revenue generated, it has a significant share of the global entertainment gross with, at the time of writing, the industry estimated to be worth around \$68 billion.[67]

While the above provides some context of *Zelda* within the history of the computer game and entertainment media, the rest of this chapter will consider the properties of computer games themselves: the debt they owe to traditional games and the qualities which are distinctly their own. By doing so, I will offer an understanding of what exactly the computer game is; something necessary if the player's relationship to it is to be understood. To this end, the first part of this chapter will consider the work of, arguably, the two foremost game scholars of the pre-digital age, Johan Huizinga and Roger Caillois, and through their definitions demonstrate how play and games have always been understood to have prosocial effects and psychological benefits. I will then consider theory in Computer Game Studies itself, specifically regarding exactly what kind of media computer games are, and how they are distinctive. I will argue that - like the definitions of the traditional game theorists before them - positive effects of the form are implied in their definitions also. Next, I will turn to the work of one of computer game studies' foremost scholars, Jesper Juul, who offers a synthesised definition which is, arguably, one of the most convincing and comprehensive accounts offered to date. The chapter will expand upon Juul's work with the idea of a virtual 'playspace' (or virtual reality), a notion variously defined by computer game scholars, such as Geoff King and Tanya Krywinska. I will argue that the notion of such a virtual playspace is as central to computer games as rules and fiction and that it, along with where the computer game is played, is central to the possibility of Maslovian satisfactions being attained.

Zelda and *Ocarina* are helpful in helping us to understand the innovation and standing of *Ocarina*. Nintendo's reimagining of the *Zelda* paradigm in 3D, for instance, *Edge* called 'a task which bore comparison to reinventing the wheel' (#*Edge* 80, January 2000). It also refers to *Ocarina* as computer games' '*Citizen Kane* Moment' allying it to the film often noted as cinema's greatest achievement (*Edge Presents*: The 100 Best Videogames, 2007: 222).

[67] McGonigal, 2011: 4

I will end by suggesting that the physical *context* of computer game play also matters, and turn to not only Juul, but to scholars of technology in the home, to note exactly how. Here I introduce the theme of domesticated technology - a concept based on the notion of taming wild animals - to describe how computer game technology becomes embedded in the rituals of family life, providing a social context for the satisfaction of Maslovian needs.

1. Traditional Games and Forms of Play

As noted above, the most pre-eminent scholars of pre-digital games are Johan Huizinga and Roger Caillios. Their thinking has been hugely influential on the thinking regarding computer games, and is often drawn upon by game studies' most eminent scholars. Their work is particularly useful in identifying the key elements of traditional games and play, something which is essential when attempting to identify what is distinct about the computer game.

1.1: *Johan Huizinga*

Johan Huizinga's most recent biographer, Willem Otterspeer calls Huizinga, '…The most famous Dutch historian' (2011: 13) and it is true that the majority of Huizinga's work focuses on fourteenth and fifteenth century European (French and Dutch) history. His book on play, *Homo Ludens* is also historical in breadth ('a gathering of information from all time and places.' (Hendicks, 2006: 10)), but places great emphasis on the role of games within civilizations and cultures. In the words of Otterspeer:

> The book presents nothing less than the common denominator of culture and the stages through which it passes, from primitive to sophisticated, from East to West. The heart of culture is sought in play in the sense that all culture is preceded by play. Culture is born as play and in play. (Otterspeer, 2011: 49)

Roger Caillois, perhaps best summarises Huizinga's work as '…an inquiry into the creative quality of the play principle in the domain of culture' (Caillois, 1958: 4). *Homo Ludens* is, arguably, the most thorough, and most admired, early study of play and

games (or, as Juul puts it, 'the study of games for their own sake' (Juul, 2005: 9)). Computer game designer Chris Crawford considers Huizinga's work, '…the finest definition of play and the most complete discussion of the subject' (Crawford, 2002: 27).

Writing in 1938[68], Huizinga argues in the preface to his book that *homo sapiens*, may be an incorrect title for our species, with man being '…not so reasonable after all.' (Huizinga, 1955: foreword). Similarly he believes the, then currently fashionable, title *homo faber* (man the maker) is not quite appropriate either. He argues that while neither was inaccurate, nor were they, on their own, sufficiently encompassing. Into the mix then, he adds *homo-ludens, (or Man* the player), arguing that playing is an equally important factor in the makeup of mankind as reasoning and making. Huizinga's study considers play from a number of cultural perspectives and in doing so, offers a wide-ranging set of associations and applications. Crucially, he provides the following general definition of play:

> Summing up the formal characteristics of play we might call it a free activity standing quite consciously outside 'ordinary' life as being 'not serious', but at the same time absorbing the player intensely and utterly. It is an activity connected with no material interest, and no profit can be gained by it. It proceeds within its own proper boundaries of time and space according to fixed rules and in an orderly manner. It promotes the formation of social groupings which tend to surround themselves with secrecy and to stress their difference from the common world by disguise or by some other means. (1955: 13)

The most relevant aspects of Huizinga's general definition (along with a discussion of examples in the computer game) are discussed below.

Play, argues Huizinga, is voluntary. 'Play to order is no longer play: it could at best be but a forceful imitation of it…' (1955: 8). Moreover, agues Huizinga, it is also unnecessary, in the sense that it serves no basic human requirements: '…the purposes it serves are external to immediate material interests or the individual satisfaction of biological needs'. Because of this voluntary, unnecessary nature of play, Huizinga argues that it was, for the player, freedom.

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[68] The English translation, however, did not appear until 1955, and so the 1955 publication is referenced throughout this thesis.

Huizinga also argues that play is unreal. It is somehow 'separate' from the prosaic concerns of everyday, mundane reality: 'It is rather a stepping out of 'real life' into a temporary sphere of activity with a disposition all of its own' (1955: 8). Huizinga makes clear, however, that the unreality of 'pretend' did not diminish the possibility of it being a 'serious' activity in the sense of its importance to the player. Indeed, Huizinga argued that play, despite its seeming superficiality, is capable of going beyond or transcending seriousness to attain something of even greater substance in the life of the player: 'Play may rise to the heights of beauty and sublimity that leave seriousness far beneath' (1955: 8). Certainly, the easily accessed narratives, multitude of sounds and vivid visuals allow what Jay David Bolter and Richard Grusin term 'transparent, perceptual immediacy' (2000: 23), or a sense of immersion[69] in the separate, playful space of the computer game. Indeed, such a concept is becoming synonymous with gaming technology. It is what Sony attempts to convey, for instance, in their 'Third Place' advertisements which coincided with the release of the *PlayStation 2* in 2000[70] and the idea continues to resonate.[71]

Huizinga argues that the player is always attempting to resolve a tension of some kind with the aim of reaching a pleasing state of equilibrium, to create order. He is engaged '...with the impulse to create orderly form' (1955: 10). This order then leads to the concept of rules, which, Huizinga argued, are essential in maintaining a coherent play world: 'Indeed, as soon as the rules are transgressed, the whole play world collapses' (1955: 11). Huizinga illustrates the importance of rules with reference to the role of the rule breaker, or 'spoil-sport', one who wilfully breaks the spell that has been created within the magic circle: 'By withdrawing from the game, he reveals the relativity and fragility of the play world in which he had temporarily shut himself with others. He robs play of its illusion - a pregnant world which literally means in-play'

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[69] The concept of *immersion* is discussed later in this chapter.

[70] http://www.youtube.com/watch?v=YFnNRibEYxc&feature=related

[71] Nokia, for instance, tapped into this notion in the 'This is where I...' series of adverts for their handheld *N-Gage* console (http://cache.gizmodo.com/archives/images/ngage_life.jpg) , suggesting that no matter how unappealing an environment an *N-Gage* (Nokia, 2003) owner finds themselves in, the immersive properties of the machine's games will transport them somewhere better. Similarly, it is what the telephone company Vodafone attempted to do with its series of 'Another Word' commercials in 2007 (http://www.visit4info.com/advert/Vodafone-Free-Weekends-Another-World-Vodafone-Mobile-Services/35004), suggesting their handsets are a gateway to a more exciting place.

(1955: 11). It is important to note, however, that Huizinga differentiates the 'spoil-sport' from cheat, the cheat being deceitful, pretending, 'to be playing the game and, on the face of it, still acknowledges the magic circle' (1955: 11). Rules remain the cornerstone of the modern computer game, though processing power means the rules can be much more complex than in traditional games.

Perhaps most famously, Huizinga argues that play is *also* apart or separate from ordinary life *temporally* and *geographically* [my italics]: 'It is 'played out' within certain limits of time and space (1955: 9). As to the first of these, play lasts until the time for play is somehow deemed to be over and the participants return to the more humdrum phenomena of reality: 'Play begins, and then at a certain moment, it is 'over'. It plays itself to an end' (1955: 9). Huizinga believes that the second, geographical, aspect of this separateness to be the most important. Play, he argues, occurs within a limited space: 'All play moves and has its being within a playground marked off beforehand, either materially or ideally or as a matter of course' (1955: 10). This 'consecrated spot' (1955: 10) can take many forms, with the only requirement being that it is used solely for the special purpose of play, thus becoming a special, near sacred place: '…all in form and function, playgrounds, i.e. forbidden spots, isolated, hedged round, hallowed, within which special rules obtain' (1955: 10). One of the examples Huizinga provides of such a place, 'the magic circle' (1955: 10), is singled out by both himself and contemporary game scholars such as Katie Salen and Eric Zimmerman in their essay 'Game Design and Meaningful Play' (in Raessens and Goldstein (eds.), 2005: 75) as shorthand to refer to this geographically separate place.[72] As with the previous comments on 'unreality', such separateness may also be the case for computer game play. Indeed, Jesper Juul terms this place - delineated in living rooms or bedrooms - 'player space' (Juul 2009: 17). 'Real life' only returns when players turn off their machines and move elsewhere.

As can be seen from his general summary, Huizinga also notes certain phenomena- *community* and *secrecy* - that hover at the edges of play. A play *community* is, argued Huizinga, something which players often hanker after in order to maintain the

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[72] As noted in chapter four, for computer game players, such sacred places are, perhaps, the likes of living rooms and bedrooms where the game consoles are placed and *domesticated*.

unique sense of fraternity that play engenders: '…the feeling of being 'apart-together' in an exceptional situation, of sharing something important, of mutually withdrawing from the rest of the world and rejecting the usual norms, retains its magic beyond the duration of the individual game' (Huizinga, 1955: 12).

That play often surrounds itself in *secrecy* is also, argues Huizinga, particularly significant, again drawing attention to its being something special: 'Even in early childhood the charm of play is enhanced by making a 'secret' out of it. This is for us, not for the 'others'…Inside the circle of the game the laws and customs of ordinary life no longer count. We are different and do things differently' (1955:12). As with players of traditional games, computer game players also interact in several ways and often on a large scale. As will be seen in chapter four, this is most certainly done in the family home. This is also done via the Internet: gamers discuss issues on web discussion boards and others write complete guides (walkthroughs or FAQs). The Internet also facilitates the option for computer gamers to compete against, or work with, each other in the games themselves, with teams (or clans) formed for this very purpose, creating Huizinga's 'feeling of being apart together' (Huizinga, 1955: 12).[73] This community has its own codes and conventions, its shorthand and its snobberies that can be seen as excluding those who are not aware of them. Such a community resonates with Mia Consalvo's concept of 'gaming capital' (2007), itself based on Pierre Bourdieu's concept of capitals (Bourdieu, in Richardson, 1986): cultural, social and economic, each being a particular form of individual resource. Sometimes, these capitals determine others. Cultural capital, for instance - a form of educational or intellectual resource - can determine an individual's status in society. That said, Bourdieu also noted that the different capitals can be converted into one another, rather than determining others. Thus economic capital can be converted into social capital (the benefits gained through

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[73] The flip side of such a concept has been considered by several scholars, perhaps most recently by technology and society theorist Sherry Turkle. Turkle argues that online connectivity engenders a sense of fake togetherness, with often shortlived online connections replacing long lasting flesh and blood ones. Users of online technology are, she argues, apart, or 'alone together', and gives the personal example of a recent conference attendance. Here, people were paying scant attention to a speaker and each other in order to attend to online activities. They were, in Turkle's words, 'There but not there' (2011: 14). While such a concept is acknowledged, such an argument does not diminish the concept that online relations and communities can be as or more intense than face to face ones.

relationships with others) through the buying of a gift: '…an apparently gratuitous expenditure of time, attention, care, concern, which, as is seen in the endeavor to personalize a gift, has the effect of transfiguring the purely monetary import of the exchange' (1986: 256). Consalvo's associated term of 'gaming capital', then, is a resource gained through knowledge of a computer game (closest in spirit to Bourdieu's cultural capital) and what she terms its paratexts[74]. According to Consalvo, such capital has great social benefit to the individual: '…depending on a player's social circle, that capital can be quite valuable in building a reputation.' (Consalvo, 2007: 184). As with Bourdieu's example of converting economic capital to social capital, the same can be done in computer game culture, with players converting their economic capital into gaming capital through the purchase of upgrades for their avatars (Taylor, 2006: 130). Such gaming practices clearly correspond to the '…desire for reputation or prestige' (1943: 371) noted in Maslow's earliest account of the basic needs.

It must also be noted that Huizinga is in no doubt that something important is gained through play, noting it at the very beginning of *Homo Ludens*: 'In play, there is something 'at play' which transcends the immediate needs of life and imparts meaning to the action. All play means something…The very fact that play has a meaning implies a non – materialistic quality in the nature of the thing itself' (1955: 1). Huizinga, then, identifies the joys of play, its freedom and 'heights of beauty and sublimity' (Huizinga, 1955: 8) it brings and such thoughts resonate with Maslow's thoughts on Being values. From Huizinga's work, it is plain to see that positive psychological effects are actually *built-in* to the very concept of play.

1.2 *Roger Caillois*

Arguably the most significant play and game scholar to emerge after Huizinga is Roger Caillois, a 'French man of letters whose oeuvre explored the mysteries of the individual, social, biological, mineral 'imagination' in a bewildering array of manifestations' (Frank, 2003:1). One of these explorations is of games. Building on work done by

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[74] These 'paratexts' are the various forms of paraphernalia surrounding the game, and they include the likes of previews, reviews and cheat-codes.

Huizinga, Caillois , in his book, *Man, Play and Games* further develops Huizinga's definition, claiming the definition as it stood was '…too broad *and* too narrow [My italics]' (Caillois, 1958: 4). However, Caillois clearly agrees with Huizinga on two key points, namely that play is voluntary (and free) and that it is a separate activity. Play, Caillois argues, is a means to escape the humdrum and tedious necessities of everyday life, and should not become another aspect of it: 'A game which one would be forced to play would at once cease being play. It would become constraint, drudgery from which one would strive to be freed' (1958: 6). Similarly, Caillois agrees with Huizinga's belief in the *separateness* of play, with it occurring within particular geographical and temporal boundaries. 'There is space for play, as needs dictate…' argues Caillois, replacing Huizinga's examples of magic circles and tennis courts with stadiums and racetracks: 'Nothing that takes place outside this ideal frontier is relevant' (1958: 6). As regards time, Caillois also concurs: '…the game starts and ends at a given signal. Its duration is often fixed in advance' (1958: 6).[75]

Most importantly, Caillois thoughts on games differ from Huizinga's regarding rules. Huizinga argues that all games are bound by rules, Caillois believes that some are not, instead being the result of 'free improvisation' (1958: 8). These role-playing, or 'as if' (1958: 8) games are free of the rules that govern other games, but the created fictions nevertheless serve the same purpose: '…the sentiment of *as if* replaces and performs the same function as do rules.'(1958: 8). It is important to make the distinction, then, that whereas Huizinga believes rules created fiction, or *illusion*, Caillois believes that games are, '…ruled or make-believe' (Caillois, 1958: 9).

As to Caillois' other disagreements with Huizinga, the most relevant one here concerns the latter's observation regarding play's 'secret or mysterious' (1955: 4) nature. While Caillois noted a relationship, or 'affinity' (1958: 4) between the two, he argues that they can not comfortably coexist, with play's extravagant nature obliterating any possibility of mystery: '…secrecy, mystery…can be transformed into play activity, but…this transformation is necessarily to the detriment of the secret and mysterious,

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[75] Such times are noted by many of those interviewed for this thesis, as exemplified in this comment from interviewee, Sam: 'When my sister went to bed, me, my mam and dad used to go upstairs to play on *Zelda'*(Sam: 3). As noted in the thesis' introduction, chapters four and five are dedicated to a discussion of interviewee narratives.

which play exposes, publishes and somehow expends' (1958: 4). Caillois' final observation is that play is *uncertain*, with a game's outcome unknown at the outset: 'Doubt must remain until the end and hinges on the denouement' (1958: 7). This consideration of a known outcome being invalid is also noted by computer game scholar Jesper Juul, whose work is considered in detail later in this chapter. A game, argues Juul (2005), should always allow for different outcomes.

Caillois also introduces the concept of what might be termed meta-rules to create fairness, noting that despite the seeming equality of games (such as, for instance, the same rules for all and the same number of chess pieces per player) other factors almost always exist which prevent this from being a reality. These 'imbalances' (Caillois, 1958: 15) include, in sport, elements of nature (wind, sun etc.) providing an advantage to one side over another. In games such as chess and bridge, the player's position in the line-up of the turn based play affects their advantage: '...in checkers or chess, the fact of moving first is an advantage [permitting] the favoured player to occupy key positions or to impose a special strategy. Conversely, in bidding games, such as bridge, the last bidder profits from the clues afforded by the bids of his opponents' (1958: 15). Caillois notes that such inequalities are often resolved by recourse to rules not inherent to the game per se, but instead the surrounding *conditions* of play. They include a strictly observed swapping of ideal positions: changing sides of pitch or courts halfway through a football or tennis match, allowing each player an equal number of opening moves during a chess tournament etc. While, in multiplayer computer games, these imbalances may be resolved in the same way as in traditional games, in single player computer games, the computer easily implements meta-rules designed to aid fairness (this may be in the games' option menu for differing difficulty levels or in intelligently adaptive computer behaviour).[76] The existence of such meta-rules can also be seen in the family rituals and handicapping discussed at the end of this chapter and in chapter four. Finally here, it should be noted that Caillois also neatly summarises the point of competitive games (or games of *agon*, (1958: 17) to use his term), the type which makes up the bulk of computer games: '…for each player to have his superiority in a given area recognized'

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[76] The clearest example of the latter is in racing games. Computer controlled cars will often speed up or slow down to provide an appropriate level of challenge.

(1958: 15). This, of course, comports with Mia Consalvo's notion of gaming capital noted above.

2. Computer Games

One of the most obvious ways in which computer games differ from the traditional games discussed by Caillois and Huizinga is that computer games also tell stories. While, in the thinking of Caillois, play corrodes the meaning of a specially created fiction in non digital games and vice versa (games are either ruled *or* make believe (Caillois, 1958: 9),[77] as noted by Computer Game scholar, Barry Atkins, reconciling play and fiction is something computer games do. Atkins states that, 'the production of story [is] the end result of play' (Atkins, 2003: 7).[78] According to Atkins, the computer game, as initially released to the consumer is an incomplete piece of fiction. It becomes complete only after receiving a significant contribution (of play or 'non-trivial effort' (1997: 1)) from the player, with them - in a limited sense - being the co-writer. Atkins explains this with reference to his playing of the game, *Close Combat* (Atomic Games, 1996):

> On the level of the individual story episode the player was provided with the building blocks of the story that was then 'written' or 'told' through its playing out according to the internal logic of the game. (Atkins, 1993: 5)

In the sense of the computer being an evolved narrative form, these building blocks most obviously include such things as *extra-diegetic* narrative information and *in-game cinematics*.[79] The first of these provides 'back-story' and might be found in a game's instruction booklet or on screen text preceding the true beginning of play, while the

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[77] It is also, of course inherent in his thoughts on play destroying the secrecy of fictions.

[78] It must be noted here, that the idea of mutual exclusivity of games and story expressed by Caillois is also one which permeated the early thinking in Computer Game Studies, with the discipline initially polarising into the two camps of ludologists and narratologists. The polarisation is much less prominent than it once was, however.

[79] These are also known as *cut-scenes*. This may be for several reasons - they *cut into* the action of play, they are cinematic cuts, they are *cut to* from game action.

second drip feeds significant plot developments to the player throughout the course of the entire game.

Perhaps less obviously, other narrative information is delivered from within the more interactive sections of the computer game, namely via visual and aural cues or, as Atkins puts it, in his discussion of *Half Life* (Valve, 1998), '…game fictions might construct meanings and construct narrative without any dependence on the mediation of language' (2003: 58). Here then, the *player* becomes (as well as the co-writer) the *reader* who, if he fails to *read* well, is presented with a bad ending. To summarise, this way of understanding the computer game is to view them as another stage in the evolution of narrative, something again identified by Atkins:

> …the game-fiction has not changed the nature of art, but has presented itself as a novel experience of reading and telling in just as surprising a way as photography and cinema did before it. (Atkins, 2003: 155)

It is necessary to note at this point that the notion of computer games having psychological benefits and prosocial effects is also incorporated into to this argument, albeit a little more obliquely than in the definitions offered by Caillois and Huizinga. Here, of course, such a notion is conveyed through the focus on the computer game as narrative: a form with a long and accepted intellectual pedigree; one capable of reflecting the finest of human thought and emotion and eliciting the same in its audience.

3. Computer Games as an Evolved Synthesis

I suggest that it is most useful and accurate, then, to think of computer games as evolved forms of both narrative and traditional games, with elements that are uniquely its own. This is the position taken by Jesper Juul, who, in his 2005 book, *Half-Real,* melds the traditional game theories of Caillois and Huizinga, notions of narrative and a consideration of the singular properties of the computer game medium, to offer something approaching a current definition or, as he himself puts it, '…a basic theory of video games' (Juul, 2005: 197). This theory rests on the notion that computer games are 'half real'. That is to say, computer games are a form comprised of '…*real rules and*

fictional worlds' (2005: 196). Based on this foundation, Juul has formed a new definition or model of the traditional game, comprising of 'six features, spanning the three categories of the game, the player and the world' (2005: 37). Juul's model takes into account the processing power, if not the representational power, that computers can bring to the classic game. Below is Juul's 'short form' (2005: 36) definition:

> A game is a rule based system with a variable and quantifiable outcome, where different outcomes are assigned different values, the player exerts effort in order to influence the outcome, the player feels emotionally attached to the outcome, and the consequences of the activity are negotiable. (2005: 36)

If we take *Half Real* as the most thorough attempt to pull apart the modern computer game in order to arrive at some sort of definition, we can see that computer games *are* a fusion of traditional games (or ludic or formal systems) *and* narratives. The computer's processing power allows for this gestalt and its processing power *and* graphical capabilities (the computer game's *immateriality*) allow for possibilities not previously available in any other form. [80]

Juul does not, however, fully explore how the computer game's graphical properties greatly contribute towards the uniqueness of the form in the virtual playspaces[81] they offer. Computer game graphics offer spaces not available in traditional games. These spaces may or may not be connected to a narrative fiction (directly or otherwise). Those that are not, include those found in simulations of various kinds, with sports simulations being perhaps the most obvious example.[82] While

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[80] Identifying such uniqueness is, argues computer game theorist Charles Bernstein, essential in defining a medium: 'In trying to understand the nature of different media, it is often useful to think about what characterises one medium in a way that distinguishes it from all other media - what is its essence, what can it do which no other medium can do?' (Bernstein in Wolf, 2001: 161). This essence, Bernstein argued is the existence of the CPU (Central Processing Unit) or 'operating environment' (2001: 161), 'they process or calculate' (2001: 161).
[81] It must be noted here, that playspace is a term that is also used in other contexts. Business scholar, Pamela Meyer, for example, uses the term to describe a form of creative thinking in the workplace (Mayer, 2010), while developmental psychologist Donald Winnicott, uses it to define an 'extremely valuable' (1971: 72) area for children's play that exists 'between mother and baby' (1971: 72). In this thesis, however, the concept of playspace is being used to refer to computer game environments only.
[82] Like 'games' and 'play', 'simulation' is difficult to define in this context. Perhaps the term *semi*simulation is more useful, suggesting a mimicking of *some* 'real world' properties – place, weather, or in the case of sports games etc., pitches and rules - while acknowledging limitations: not every variable can yet be accounted for in a computer game.

superficially it is possible to say that such spaces can be found in the play spaces of the traditional games looked at by Huizinga and Caillois, these spaces are now *perfect* for play or can be designed with such an intention. In traditional playspace, the player is at the mercy of several factors: the weather, the state of the space itself (the football pitch etc.) and the availability of such, both in terms of that which the players' local geography allows and with whom the space has to be shared. In many computer game equivalents, these factors disappear. The football pitch is always available and rain can be switched on or off depending on the player's preference. Here, if the player chooses to play in heavy wind and rain, it only affects the movement of the ball, not their physical comfort and health. Importantly, such games are now available to those whom such open spaces, through their geographical location, is denied.[83] This is a notion supported by computer game journalist Steven Poole in his discussion of Japanese gamers:

> Most Japanese people live in cramped accommodation in sprawling cities. The idea of escaping to a rural idyll…is a largely unattainable fantasy. Being able to recreate that form in a videogame context is, it seems, a decisively valuable pleasure. (2000: 166)

This sense of the computer game as a geographical wonderland is most profoundly seen in those games that do offer more obviously fictional worlds. Here, spaces either more fantastical or unattainable can be made available. Computer game scholar, Michael Nitsche contributes to the concept by noting that '3D game spaces allow players to crawl, jump, run, fly and teleport into new worlds of form and function. The game space that we can experience, discover and manipulate has become endless and at the same time more accessible than ever' (Nitsche, 2011: 2). Nitsche also contrasts the fictional space in a computer game to the fictional space of a film, the latter of which would disappear - and become simply a set - once entered by the spectator. Not the former, however: 'By contrast, it is a defining characteristic of video game spaces that they

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[83] Appropriately enough, *Zelda's* creator and key designer, Shigeru Miyamoto, is aware of the importance of such playspace, as noted in this observation on the creation of his other main game for the *Nintendo 64* platform, *Mario 64* (Nintendo, 1996): 'He…spent weeks perfecting the areas Mario would explore in his 3D masterpiece; it was a process he compared to designing a theme park' (Donovan: 2010: 278).

allow this step into the represented space…players are free to explore and interact with it directly' (2011: 85).

This comparison of computer game space to film space is an obvious one, and comports with David Bolter and Richard Grusin's concept of *Remediation*. Remediation, they argue in their book of the same name, is '…the representation of one medium in another' (2000: 45). This, at its most simple, includes the digitizing of visual artworks and literary texts. Computer games, they argue, remediate visual elements of narrative film, with the player of a game given 'some control over…the stylistic realization of it, in the sense that they can decide where to go and what to do' (2000: 47). Awareness of such freedom was heightened by the cognitive playthrough undertaken in this thesis. This playthrough - discussed in chapter three – involved the mapping of choices available to players as they moved through the game: such choices are almost limitless.

Among such free, 'impossible spaces' (Nitsche 2011: 118), computer games offer space stations (Gameloft's *N.O.V.A,* 2009), gothic medieval landscapes (Sony's *Medievil*, 1998) or crumbling ancestral homes (Nintendo's *Luigi's Mansion*, 2001). The ability to explore such spaces - through a computer game - is unique, as are the formal ludic properties which also exist within such environments (the number and type of obstacles to overcome) and connects to such Maslovian need categories as cognitive stimulation, freedom and beauty. These spaces, then, can either be explored for the pleasure of the visuals[84] alone, for the ludic properties embedded within them or both. An emphasis on playspace also connects the computer game to aesthetic theory. In particular, it places computer games in the realm of Kantian aesthetics, in terms of both players and developers. Players, for instance, may sometimes access the playspaces for their beauty alone, resonating with Immanuel Kant's notion of disinterestedness. In his *Critique of Judgement*, Kant uses the term 'disinterested' to define the state upon which appreciation of beauty is premised, essentially arguing that beauty is not a means to an end, but an end in itself, as can be seen in the comment below from his discussion of 'taste':

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[84] Such aesthetic delights are discussed by my interviewees throughout chapter five, and in particular in the section devoted to spectacle.

> Taste is the faculty for judging an object or a kind of representation through a satisfaction or dissatisfaction without any interest. The object of such satisfaction is beautiful (Kant, 1914: 96)

Developers, on the other hand, sometimes use computer game environments to signify good and evil, resonating with Kant's notion of beauty symbolising morality ('Now, I say, the beautiful is the symbol of the morally good' (Kant, 2005: 353)). Hell, for instance, with all of its attendant furnaces and monsters, is the setting for GT Interactive's *Doom* (1993)*; dark, dank browns saturate Sega's serial killer game *Condemned* (2005)*, while, in contrast, the preservation of lush pastoral idylls is presented as something worth fighting for in countless Japanese RPGs. Whether always used in such a metaphorical way or not, many computer games offer these vast environments, these 'impossible spaces' (Nitsche, 2011: 118) more than anything else. As game scholars, Geoff King and Tanya Krzywinska point out, 'The production of a compelling game world in three dimensional graphics, often appears to be privileged over other dimensions such as narrative and gameplay' (2002: 28). Importantly, they also note the great attraction of such game worlds, to gamers: 'The appeal of being able to explore spectacular 3D worlds in real time should not be underestimated' (2002: 29). The richness of such playspaces may also engender the process of immersion.

The metaphor of immersion has its roots in literary theory and has been appropriated and embellished by those studying digital environments. Like the literal example of being submerged in water from which it originates, immersion suggests the idea of being completely submerged in a text. Victor Nell, one of the pioneers of the study of immersion in literary forms noted that readers are sometimes said to be 'lost in a book' (Nell, 1988) Computer game players, then, can be said to be *lost in a game*. It is a concept which has been variously defined in regard to digital contexts. Clinical psychologists Scott Rigby and Richard M. Ryan, for instance, refer to it as 'presence' (2011: 81), and it has similarities to Mihaly Csikszentmihalyi's concept of a *flow* - or autotelic - experience, which is:

> '…the state in which people are so involved in an activity that nothing else seems to matter; the experience itself is so enjoyable that people will do it even at great cost, for the sheer sake of doing it. (Csikszentmihalyi: 2002: 4)

'A person in such a situation' argues Csikszentmihalyi, 'can make full use of whatever skills are required and receives clear feedback to his actions; hence he belongs to a rational cause and effect system' (Csikszentmihalyi, 1975: 36). As with Maslow's work, a basic understanding of Csikszentmihalyi's concept may best be gained from a consideration of the diagram used in his own work (1990) and which often accompanies his definition in scholarly articles which discuss it. Csikszentmihalyi argues that for a person to have a flow experience, they must be neither under or over challenged in accordance with their skills. Being under challenged produces feelings of boredom and being over challenged produces feelings of anxiety. In other words, the level of challenge should be just right. This is exemplified in the diagram by showing the skills of tennis player Alex (A) increasing along the horizontal axis (A1 and A2): 'If he keeps practicing, his skills are bound to improve and then he will grow bored just batting his ball over the net' (2002: 74-75). In order to maintain *flow*, the challenges must increase in direct proportion to his skills (A4). Such thinking resonates with that of Loftus and Loftus, 'optimal level of informational complexity' (1983: 42) footnoted in chapter one, while the 'complexity of consciousness' identified by Csikszentmihalyi refers to a development or, 'growth of the self' (2002: 74), a term which has a clear resonance to the thinking which underpins Maslow's Being values.
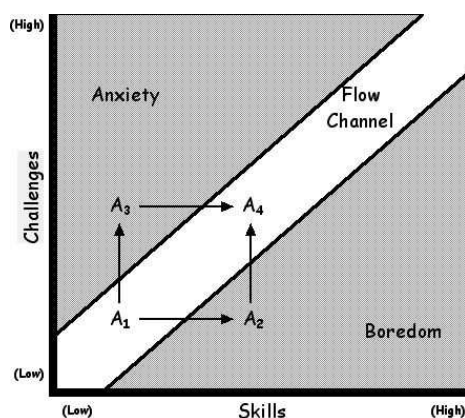
Figure 4: A visual representation of Csikszentmihalyi's concept of flow**. (Csikszentmihalyi, 2002: 74). Image Source: Wikimedia Commons.**

Interestingly, both of the groups Csikszentmihalyi initially studied for his work were game related 'college soccer and hockey players' (1975: 14), and he discusses the influence of Caillois, Huizinga, Maslow on his thinking (1975).

While Csikszentmihalyi notes that the flow experience is a difficult one to define - it being different for all those who experience it, it is, as noted by his subjects, characterised by a great sense of positivity: 'you feel relaxed, comfortable and energetic' (1975: 39); 'I am less aware of myself and my problems' (1975: 40); 'what a powerful and warm feeling it is' (1975: 42). As such, *flow* and its effects resonate with Maslow's concepts of the peak and, perhaps even more so, the plateau experiences, noted in the previous chapter, with computer games creating the conditions necessary for achieving 'a serene, cognitive blissfulness' (Maslow, 1975: 348). In essence, immersion relates to a player's absorption in a playspace and because of its heavily interactive properties, becoming immersed in a computer game's playspace is a relatively quick process.

I propose, therefore, that a definition of the computer game should take into account rules and fiction, but also the notion of a virtual playspace, this third category helping to emphasise computer games' unique qualities. A computer game consists, therefore, of *rules, fiction and playspace.* A computer game with these properties may be termed *gamic*.[85] Firstly, without rules, there is no game. As noted by Juul, the rules of a game are, in this sense[86], non-negotiable. The processing power of the computer allows that the number and complexity of computer game rules can be greater than those found in traditional games. Secondly, a computer game offers a fiction - whether that is as a straightforwardly presented narrative, narrative impetus or fictional world. Finally, through its virtual reality - or playspace - a computer game makes 'impossible space' (Nitsche, 2011: 118) possible and available for the player. This playspace is perfect. It is not affected by the real world limitations noted above and is often richly interactive, perfectly suited for the player character's abilities and gameplay objectives. Indeed, as noted by *Tomb Raider* (Eidos, 1996) creator, Toby Guard, '[Lara Croft's] world is

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[85] This is to differentiate true computer games from pieces of software which have some superficial similarities to them, but which, as noted in the introduction, are not games.
[86] Rules may, of course, be negotiated and challenged in the course of play, especially between players in multiplayer games.

designed for her to exist in' (in Poole, 2000: 223). It also often allows a player to simply play freely, in the sense noted by Huizinga, regardless of game objectives. Virtual playspace is important, in this definition, then, as it highlights the property which distinguishes computer games' visually represented space from that of other artistic forms. It is a space specifically designed for - and which allows - for interactivity, or gameplay, a term appropriately defined in the following way by games theorists Simon Egenfeldt-Nielsen, Jonas Heide Smith and Susanna Pajares Tosca:

> The term 'gameplay' is often used but rarely defined. As commonly employed it refers to the game dynamics, or more simply, 'how it feels to play a game'. Although this feeling is influenced by a game's audio and visual aspects, gameplay is usually considered a consequence of the game's rules rather than its representation. Using this basic definition, we can say that the gameplay of chess is deliberative and [sic] while the gameplay of *Burnout 3* is frantic and easily accessible.
>   In line with the common use of the term, we will define gameplay as the game dynamics emerging from the interplay between rules and game geography[87]. (Egenfeldt-Nielson, Smith and Tosca, 2008: 101-2)

This notion of interplay or interactivity[88], is weaved though this definition and through the arguments of the theorists noted above. It is, for instance, in Juul's notion of exerting effort and in Atkins concept of player as co-author. If a computer game is not played with, it does not exist in any meaningful sense. Moreover, the level of play - or interplay - demanded is extremely high. As will be understood from the details of cognitive

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[87]This 'game geography' should be understood as a synonym for *virtual playspace*.

[88] It is acknowledged here, that the idea of 'interactivity' is a troublesome one. As argued by Media scholar Lev Manovich, 'All classical, and even more so, modern, art is 'interactive' in a number of ways. Ellipses in literary narration, missing details of objects in literary art, and other representational art require the 'user' to fill in additional information' (2001: 56). However, this thesis – like Karen Collins in her book, *Game Sound* (discussed briefly in chapter five), subscribes to the brand of interactivity defined by Media theorist Andy Cameron: 'Interactivity refers to the possibility of an audience actively participating in the control of an artwork or representation. Until now, what we call culture has not allowed for a great deal of interaction from the audience. The audience is given a space for interpretation and a space for reaction, but not for interaction. There are those who argue that interpretation is interaction, and so of course it is, but not in the sense intended here. For the purposes of this discussion, interactivity means the ability to intervene in a meaningful way within the representation itself, not to read it differently. Thus interactivity in music would mean the ability to change the sound, interactivity in painting to change colours, or make marks, interactivity in film the ability to change the way the movie comes out and so on.' (1995).

playthrough presented in the next chapter, negotiation of a computer game's playspace demands interaction at every turn.

Ocarina of Time (Nintendo, 1998), the case study for this thesis, certainly matches this definition. Firstly, it is a game based on rules. In addition to the mathematical system - embedded in lines of code - which bind the game together, there are processor enforced rules which the player must abide by. The player must, for example, complete certain tasks before others[89] and defeat certain adversaries in a very particular way[90]. Solutions to dungeon puzzles are, similarly, very exacting. Secondly, *Ocarina* has a strong narrative element; its importance as part of the game as a whole is emphasised by its immediate foregrounding: a cut scene (Atkins, 2003: 35) illustrating the narrative conceit appears as soon as the start button has been pressed. Further cut scenes appear at regular intervals throughout and the player's objective is to provide satisfactory narrative closure. Thirdly, it is a game which offers a large and interesting virtual reality, or 'playspace', as I term it. As discussed in chapter five, *Ocarina* presents several areas of simulated (or *semi*simulated) natural environment (forest, field, lake, desert, mountain). In addition to this are the more fantastical temples (or dungeons). The former allow for free exploration and simple appreciation of beauty while the latter, of which there are nine, provide complex paths and puzzles for players to think their way through. Because of this, *Ocarina* is a game which prioritises reflective, 'deliberative' play over fast reactions. (Egenfeldt-Nielson, Smith and Tosca, 2008: 101-2). *Ocarina* is, in short, a highly *gamic* game.

These discussions raise questions of context: in the discussion of Nintendo and *Zelda*, the computer game has been positioned in its historical context, while through the discussions of Huizinga's magic circle and virtual playspaces the contexts of play have been considered. All of these, to varying degrees, touch upon how context has a bearing

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[89] This is something learnt at the very beginning of the game. The player is prevented from taking Link from his home ('Kokiri Forest') until they have located and equipped him with a sword and shield.
[90] The most obvious examples of this are end-of-temple 'Bosses' noted by interviewees in chapter five. Each of these has a particular flaw which must be discovered and exploited. While the etymology of the word 'boss' to denote a game or level's most difficult enemy, may always remain a mystery, perhaps the most thorough attempt to discover it can be found in the discussion at the academic mailing list, GAMESNETWORK: bodd'https://listserv.uta.fi/cgi-bin/wa?A2=ind1009&L=GAMESNETWORK&P=R4117&1=GAMESNETWORK&9=A&J=on&X=7D0CDC266CD34A6685&d=No+Match%3BMatch%3BMatches&z=

on meaning. Such considerations, then, lead to a fuller consideration of the physical context, or environments, in which computer game play occurs and how such play environments contribute to games' positive effects on their players. This physical context is the home, which positions the computer game as a particularly distinct form of domesticated technology, a discussion of which will form the final section of this chapter.

4. Domestication of Technology

While arcade machines and amusement arcades still exist, their heyday was in the late 1970s and early 1980s, with most computer games for the past twenty five years being played on portable consumer technology situated in domestic settings. Therefore, this social, cultural and technological context is the one under consideration in this thesis. So far, I have offered an account of play and games, now it is important to offer an account of their social context. Domestication theory is an extremely helpful way of understanding this context.

A great deal of work has been undertaken, from the 1970s onwards, on the consumption of media texts within such settings, a particular strand - or offshoot - of reception studies. It refers to the manner in which people (in particular, families) access and use technology in everyday, or domestic, life. Although not being coined until the early 1990s, the concept through which such studies can be best understood is that of *Media Domestication*, a metaphor for, 'the incorporation of technology into everyday life'. (Silverstone in Berker *et al*, 2006), and was initially developed by sociologists Roger Silverstone, David Morley, Lesley Haddon and Eric Hirsch' (Berker *et al*, 2006: 2). New technology, when first brought into the home is 'wild' (2006: 2-3) and may initially be a little feared, but through use it eventually becomes 'tamed', accepted and sometimes loved. (2006: 2). This is certainly the case in the studies undertaken by Silverstone *et al* and it is also the case for the technologies used by those interviewed for this study.

To illustrate the concept of domesticated technology, we can turn to this example of the domesticated television set noted by Silverstone. Silverstone invokes the work of

Winnicott and, in particular, his work on transitional objects noted in chapter one, to make the point about how important the domesticated technology of the television set can become to the very young: 'The continuities of sound and image, or voices and music, can be easily appropriated as a comfort and a security' (Silverstone, 1994: 15). Importantly, Silverstone also acknowledges that such comfort is not restricted to television: 'Many technologies, particularly communicating or informing technologies do…have the capacity to generate a degree of…security and attachment in a similar way' (1994: 15).

Indeed, studies in the area of domestication are wide ranging and analyse consumption patterns through the now traditional lenses of gender, class, race and age. Sam Moores gives an overview of such 'critical ethnographic research' (Moores, 2000: 92) and the technology involved, its range spanning the earliest home radio sets (and the programmes broadcast) in the 1930s which 'chimed in with everyday domestic rituals [and]…began to weave itself skillfully into the repetitive rhythms of quotidian culture' (Moores, 2000: 53), to the emergence of personal computers in the early 1990s. Technological (ICT), socially situated (Moores, 2000: 92) objects such as these, once accepted and domesticated, more than simply fitting into the rhythms of family life actually change those rhythms and become factors in contributing towards the reinforcement of 'home' and security. Silverstone, again discussing television, states that it becomes 'a member of the family insofar…as it is the focus of emotional or cognitive energy…or providing comfort or a sense of security' (Silverstone, 1994: 40). James Lull, in a 1980 case study, also credits the same technology with facilitating familial closeness:

> The man [the husband] was a hard working labourer who nearly always fell asleep as he watched television at night. He dozed as he sat in a recliner rocking chair with his shoes off. His wife who had been sitting on the floor in the same room pushed herself along the floor until she was close to his chair. She leaned back until her head rested against his bare feet and smiled as she created this rare moment of intimacy. (Lull in Moores, 2000: 24)

While the games console is still under-theorised in regards to such domestication, its possibilities as a transitional object and its acting as a locus of family closeness in

general, the same basic principles that underpin these arguments for older technology apply. The game console is, after all, also technology that becomes domesticated. Because of the distinctive properties of games and games technology, however, the possibility of it instigating such bonding is even *greater* than with such older technology. This distinctive property is that of playful interaction and 'non- trivial effort' (Aarseth, 1997: 1) and the corresponding level of social interaction this stimulates when playing with others. Such interaction, in turn, acts as a form of social adhesive, and can contribute towards the satisfaction of some Maslovian basic needs of safety and love and belonging.

That technology may be able to encourage such interaction, and act as such an adhesive, is in direct contrast to views held by some scholars, in particular some critical theorists who argue that media technology is divisive and atomising. One of the best known of these thinkers is Neil Postman, who discusses the drawbacks of technology in several publications, most notably *Amusing Ourselves to Death* (1985) and *Technopoly* (1992). He makes his antagonistic stance regarding technology very clear in the former, allying his arguments with the central thesis of Aldous Huxley's *Brave New World*: 'No Big Brother is required to deprive people of their autonomy, maturity and history. As he [Huxley] saw it, people will come to love their oppression, to adore the technologies that undo their capacities to think' (Postman, 1985: 3). The Western world in particular, argued Postman, is 'amusing itself to death': uncritically absorbing output from media or entertainment technology [91].With the passing of several more years and the subsequent development of yet more sophisticated technology, Postman's pessimism deepened. Of this more sophisticated, computer, technology - the technology at the heart of this thesis, in fact - Postman is particularly scathing, seeing it as a benefit to the ruling elite only: 'To what extent has computer technology been an advantage to the masses of people? To steelworkers, vegetable store owners' (Postman, 1992:10). It is unlikely, then, that Postman would see the subjects of this study - hardly members of the ruling

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[91] In addition to such views being in opposition to the theory of domestication, they also run counter to the thinking of those studying media fan cultures such as Lisa Lewis (1992), Matt Hills (2004) and Henry Jenkins (1992, 1996, 2006, 2008), the final of whom notes that fans are often, 'active producers and manipulators of meanings' (Jenkins, 1992: 23). Jenkins' work is referred to again in chapter five.

elite - as being beneficiaries of computer technology. To them, technology is a 'dangerous enemy' (1992: xii).

However, that modern technology, and in particular the unique interactive properties of computer games *can* engender a high level of social bonding is supported by recent work in Computer Game Studies itself. Modern developments in game technology and philosophies[92] have encouraged greater levels of social play and subsequently there has been a developing body of work within Computer Game Studies - and by those studying the impact of computer games in related fields - on the various dynamics of the phenomenon. While much of this work has been focused on the online aspect of social play, work has also been done on offline, or what might be termed face-to-face, social play. Child Psychologist Pål André Aarsand, for instance, in his study of 'the digital divide' - that is, the differences in knowledge of technology between youngest and oldest family members - notes how parents and grandparents exploit their ignorance of computer game technology in order to '…enter into social intercourse with children…' (Aarsand, 2007: 19).

Appropriately enough, considering his role in identifying key aspects of the computer game, some of this work has also been undertaken by Jesper Juul. In his most recent book, *A Casual Revolution*, Juul examines what games developer Simon Amor terms 'off-screen interaction' (Juul, 2010:121). A key aspect of this interaction - termed a 'metagame' in an essay by games designer Richard Garfield (Dietz, 2000: 16-22), a term Juul also adopts - is social relations between players. Juul notes that multiplayer games 'have a wide range of undetermined social consequences, of meanings' (Juul, 2010: 122), meaning that the implied key objective of the game - to win - is not always the key objective of the players. Juul notes, 'Who you play with…influences how you play. Playing against your boss, your partner or a child will most likely make you pause to consider, for example, will a child cry if he or she plays badly and loses?' (Juul, 2010: 122). Sometimes, then, games are used as a means to enrich relations between people. This joint use of domesticated computer game technology to enrich and unite

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[92] This explosion in social play began, arguably, with the success of Microsoft's online console service, *Xbox Live*, in the mid 2000s, and grew through the new demographics reached by Nintendo's *Wii*. It continues to grow via social networking sites such as *Facebook*.

also resonates with several other important sociological ideas. One of these is Ritual Theory, propounded by cultural anthropologist Victor Turner, who developed his theories on ritual from his studies of the Zambian Ndembu tribe in the 1950s (Deflem, 1991). In particular, Turner notes that in the tribes studied, certain things - objects, activities, words, relationships, gestures or spatial units – (Turner, 1967b in Deflem, 1991: 5) took on a particular, symbolic importance:

> The meanings of symbols are multiple, giving unity to the morality of the social order and the emotional needs of the individual. (Deflem, 1991: 6)

The symbols in the case of computer game players are, of course, the pieces of computer game technology and behaviours (rituals) players may create around them.

Another - more current - thinker in the area of interactive rituals is sociologist Randall Collins and his work on mutual focus, or *entrainment*. As with Turner, Collins too notes the importance of joint activities, or ritual, to social groups. Such joint focus, argues Collins, allows participants to 'become entrained in each other's bodily micro-rhythms and emotions' (Collins, 2004: 47). Such entrainment brings several positive outcomes, including, 'group solidarity; emotional energy [EE] in the individual: a feeling of confidence, elation, strength, enthusiasm…' (2004: 49). Communal play around the domesticated games console may also engender such entrainment and emotional energy.[93]

Conclusion

In this chapter, I have argued that both Nintendo and *The Legend of Zelda* series arrived at a key point in the history of computer games, the company capitalising on an industry downturn to sell unique product to a predominantly young demographic. The impact of Nintendo's emphasis on the values of family and childhood, and the *Zelda* series' innovations, is plain to see in the interview narratives excerpted in chapters four and five. I have then discussed the properties of the computer game and considered the

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[93] It must also be noted that the domesticated games console challenges the temporal and geographical rigidity of Huizinga's magic circle, suggesting instead that the boundaries are somewhat fluid or, as computer game theorist T.L. Taylor notes 'malleable and porous' (Taylor, 2012: 62), with family members drifting in and out of play.

work of numerous scholars in creating a definition. I argue that computer games share some traits with traditional games and turn to the work of the foremost game scholars of the pre-digital age - Johan Huizinga and Roger Caillois - to note what these are. In addition to identifying games' formal properties, I argue that the work of these thinkers also reveals how games and play have always been understood to be personally and socially enriching. Huizinga argues, for instance, that play is as important a characteristic (facet) of man as any other, capable of taking him to 'the heights of beauty.' (1955: 8) and allowing him to create order, something Maslow notes as an important Being value (1962: 93). Play, says Huizinga is a special unordinary activity, allowing groups who indulge in it, to be 'apart together' (Huizinga, 1955: 12). Something akin to this in regard to play with modern computer games is implied by my interviewees, and noted in chapter four. Huizinga's characterisation of play as something which 'transcends the immediate needs of life' (1955: 1) again positions play within Maslow's Being values, concerned as they are with experience beyond hunger, thirst and other basic physical needs.

I have then argued that the second of these pre-digital scholars, Roger Caillois, while agreeing with some important points of Caillois, also offers some extremely important ideas of his own. Like Huizinga, Caillois too believes that play, if it is pure and true, is undertaken freely. I have noted that Caillois also believes however, that *not* all play is rule bound, something which will be illustrated in the comments from my interviewees (and especially their play with *Ocarina of Time*'s ocarina) in chapter five. I have drawn attention to Caillois' identification of negotiable or meta-rules which exist in the more nebulous conditions of play: which player plays first and which football team gains the prevailing wind? I argue that computer games also have such meta-rules, and turn to the work of computer game scholar Jesper Juul to note how these negotiable rules become embedded in domestic rituals which surround computer game play.

Computer games are, I argue, similar to these traditional games because they too involve rules and play and I again point to the work of Juul to illustrate this. Importantly I also argue that computer games *differ* to traditional ones in that they tell stories, and look to the thinking of computer game scholar Barry Atkins to illustrate exactly how: they tell interactive tales with the players as their co-authors. Like the prosocial effects

and psychological benefits Huizinga and Caillios identify as being inherent to the playing of traditional games, I note that benefits are also gained from engaging in computer game narrative, which performs the intellectually enriching role traditional narrative has played for centuries. I also argue that computer games differ from non electronic ones in the playspaces they offer: huge virtual ones, unbound from the limitations of the physical space to which traditional games are tethered. It is these properties – prevalent in *Ocarina of Time*, the focus game for this thesis - which allows gameplay, the 'game dynamics emerging from the interplay between rules and game geography' to flower (Egenfeldt-Nielson, Smith and Tosca, 2008: 101-2), inspiring immersion and a sense of Csikszentmihalyi's flow in its players. This immersion and flow through gameplay, comports with Maslow's concepts of cognitive need satisfaction and peak and plateau experiences. Space is, I argue, also part of the play experience beyond the virtual playspace of the game, as the technology which facilitates the computer game exists in the real space of the home. Here, I contend, it has become domesticated, a comforting object which is a locus for shared activity, strengthening social and emotional bonds between family members.

Understanding both the formal properties of the computer game and the social contexts in which it is played is essential in appreciating the experiences of my interviewees which are discussed in chapters four and five. I turn now to a discussion of the methodology employed in the research which sought to empirically explore the effects of playing *Ocarina of Time*.

<div align="center">**Chapter Three**</div>

<div align="center">**Methodology**</div>

Introduction

This chapter will outline and discuss the methods of data collection and analysis. I open with a discussion of the aims of the research, which looked to discover if and how computer games bring their players prosocial and psychological benefits. In particular, I discuss the two strands of the methodology: a cognitive playthrough of *Ocarina of Time;* and face to face and email interviews with its players. I offer the playthrough as a methodological tool for computer game studies, and discuss the influence it had not only on the interview design, but also on my interpretation of interviewee responses.

The chapter is comprised of three sections. The first section recounts the rationale for the selection of *Ocarina* as a case study. The second section provides an account of the research process itself. At the heart of this section is a discussion of the interview sample and design. The third section provides a consideration of ethical issues, highlighting the key challenges associated with the relatively new method of qualitative research via 'computer mediated communication' (CMC). I conclude with a critical evaluation of the methodology.

<div align="center">**1. Intent and Design**</div>

The aim of the research was to discover if, and in what ways, the computer game brings its players psychological and social benefits. It was also to clarify what these benefits are and how they are achieved in a *specific* configuration of the player, the social and cultural context and the game object. The experiences of computer game players therefore needed to be at its heart: without their voice, any findings and conclusions would remain speculative. As stated previously, lack of first-hand data is also one of the problems identified with Maslow's theory, and the research aimed to ground and explore his hierarchy of needs in qualitative empirical research.

The research was designed as a case study of one particular game and the relationship that players had to it and its social and cultural context. Such an approach allowed the research to generate in-depth data regarding the player experience. It also allowed for digression in related areas, with the discussion of the game acting as an anchor, or point of reference, to which the conversation could return. Most importantly, focusing on one single game allowed for a sustained, *standardised,* and detailed investigation of if and how playing the game fulfilled the psychological needs of individuals, and the extent of its prosocial effects.

The game chosen for the study had to fulfill important criteria. It had to contain all of the properties expected in a computer game (as discussed in chapter two). Firstly, it had to provide a rich game world (or virtual playspace) allowing for a serious level of interaction. A computer game without this is, arguably, barely a computer game at all and the study aimed to analyse a highly *gamic* game.[94] Secondly, the game had to have a violent element to it - some element of combat for instance - as many, though not all, of the games criticised in the negative effects literature contain this. I considered it necessary to confront the existing psychological studies in their own terms, and wanted to avoid the accusation that I had merely selected a game without the kind of combative/violent element that was often seen as responsible for negative effects. [95] Thirdly, the game chosen had to be a popular one which was widely played, and therefore – whilst not 'representative' in a statistical sense - provided a good representation of the kinds of effects that mainstream gamers could be getting from their

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[94] When computer games receive a poor critical reception, it is often because such interactive gamic properties are not there. Even the most cursory read of the critical comments appended to a 'ten worst games' list - and such lists abound on the Internet- draws attention to this fact: they lack gameplay. Perhaps the most famous badly regarded game is Atari's *ET* (1982). One computer game historian, Leonard Herman, calls it, 'repetitive and unimaginative' (1997: 76) while another, Steven L. Kent notes that it, 'became infamous throughout the video-game industry for its dull play and disappointing story' (2001: 238). Online critics are usually less polite.

[95] PEGI (Pan European Game Information), the organisation responsible for the certification of computer games in Europe has given all versions of *Ocarina of Time* a '12' rating, and makes the following recommendation: The content of this game is suitable for persons aged 12 years and over only. *It contains:* Non realistic looking violence towards human characters. http://www.pegi.info/en/index/global_id/505/?searchString=ocarina+of+time&agecategories=&genre=&organisations=&platforms=&countries=&submit=Search#searchresults. The comments of North America's equivalent organisation (the Entertainment Software Ratings Board), give a more detailed breakdown of the re-released *Ocarina*'s contentious content: 'Animated Blood; Fantasy Violence; Suggestive Themes'. http://www.esrb.org/ratings/search.jsp?title=ocarina+of+time&fromHome=fromHome

experience.[96]

The game that was chosen - according to these criteria - was *The Legend of Zelda: Ocarina of Time*. It is highly gamic, demands violent actions from the player character (the first thing the player must do is find a sword), and is old enough to have gathered a wide-ranging fanbase. It also retains a contemporary sensibility and popularity; something highlighted by how little of it was updated for its 2011 3D release and how well it has sold.[97] While chapter two discusses some popular criticism of the game, it is also worth noting here that both the *Zelda* series in general, and *Ocarina of Time* in particular, has recently (Summer 2011) received a great deal of critical consideration. This is due not only to *Ocarina*'s 3D release, but to the series reaching its twenty-fifth anniversary. The magazine, *Retro Gamer*, for example dedicated their July 2011 edition to a celebration of *Zelda* and *Ocarina*, introducing an article on the latter with the comment, 'Retro Gamer takes a look back at the game many people consider the pinnacle of the medium' (*Retro Gamer#* 90: 25).

In addition, *Ocarina* was selected over and above a multiplayer game. There has already been a significant amount of sociological work done on multiplayer games, especially Massively Multiplayer Online Role Playing Games (MMORPGs) and this has grown exponentially throughout the period of the research[98] and continues apace.[99] The reason for this is clear: the multiplayer game visibly demands social interactions, making it a rich area for sociological exploration. The single player game, on the other hand, remains - with some notable exceptions[100] - under-theorised. It has been

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[96] Choosing a very new game to use as a focus, however, was not an especially viable option: a new game gives critical reputation - one yardstick by which to measure game quality - insufficient time to accrue, and also allows little time to grow a fanbase from which to choose an interview sample.

[97] Nintendo's financial report for December 2011 noted that the *3DS* version of *Ocarina of Time* (Nintendo, 2011) had sold 2.59 million copies. http://www.nintendo.co.jp/ir/pdf/2012/120127e.pdf

[98] T.L. Taylor's, *Play Between Worlds* (2006) and Mark Meadows, *I Avatar* (2007) are especially interesting published examples of such work. The former provides an in-depth account of a single MMORPG (*Everquest*) community, both within and without the game, the latter a consideration of player identity within several online worlds.

[99] The success of MMORPG, *World of Warcraft* (Blizzard Entertainment, 2004) seems to have created an appetite for, and accelerated the growth of , such work, as the following recent examples - both published in 2010 - attest: *My Life as a Night Elf Priest: An Anthropological Account of World of Warcraft* (B.A. Nardie), and *Warcraft Civilizations* (W.S. Bainbridge).

[100] These exceptions include works by Barry Atkins (2003), Jesper Juul (2005; 2010) and Graeme Kirkpatrick (2011).

neglected, sociologically because of the generally *assumed* lack of social interactions around it. I am redressing this imbalance by taking a necessarily social psychological approach to the single player game and by exploring the *domesticated* game playing experience in its specific social and cultural context.

1.1 *Method One: Cognitive Playthrough*

I adopted a two-staged methodology with which to explore the player experience of *Ocarina*. The first aspect of the methodology was what I term a 'cognitive playthrough' and which, I suggest, could be a valuable methodological tool for computer game studies more widely. This method was devised as a supporting beam to the second aspect of the methodology: qualitative interviews.

The 'cognitive playthrough' of the game, undertaken by myself, aimed to provide a consideration of how the game's virtual space is negotiated by the player. As noted in chapter two, part of the distinctiveness of games is precisely that they are *played.* It was therefore important to design a tool that could capture how the experience of playing the game feels to the players: how the challenges that lead to flow and immersion, how the *gameplay*, 'the game dynamics emerging from the interplay between rules and game geography' is experienced first hand (Egenfeldt-Nielson, Smith and Tosca, 2008: 102)', Indeed, this is the only way that an understanding of *feel* - 'the tactile, kinesthetic sense of manipulating a virtual object' (Swink, 2008: xiii) - can be gained.

The objective of the playthrough was to aid the design of the interview questions to help better capture this aspect of the player experience, and it also played a role in helping to understand player responses**.** The notion of the cognitive playthrough was inspired by cognitive *walkthroughs*, which originate in the field of Human Computer Interaction[101], or HCI, a field and term 'only in widespread use since the early 1980s' (Dix, 2004: 3), but influenced by the study of ergonomics and ICT from the 1940s

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[101] Game designer Steve Swink, whose definition of 'game feel' is described in the body text, elaborates on his definition, and allies it to this field by referring to feel as, '…a kind of "virtual sensation", a blending of the visual, aural and tactile. In short, it is one of the most powerful properties of human computer interaction' (Swink: xiii).

onwards. A walkthrough's aim is to test if a computer program or system works as it is meant to for a typical user and is undertaken by a user who creates various inputs and notes the results. For most computer programs, the user is testing for smoothness, or ease of use, with a well designed program not frustrating progress, or making the user feel overwhelmed by the technology. In the words of HCI expert, Ben Shneiderman, 'Effective systems generate positive feelings of success, competence, mastery and clarity. The users…can predict what will happen in response to each of their actions' (1998: 10). For a game, however, while the basic principles of the approach remain, the aim differs as games must - to a certain extent - frustrate progress, inspiring the search for solutions (or resolution) in its users, or players.

The playthrough had a rather protracted gestation period, with several ideas outside of HCI considered. These included a form of content analysis originated by computer game scholars Mia Consalvo and Nathan Dutton[102] in which it is suggested that games can be treated as texts and a version of what they termed a 'Gameplay Log' was utilised for the playthrough. Also influential was computer game theorist Ian Bogost's concept of *Unit Operations* discussed in his book of the same name. In it, Bogost suggests that games (their spaces, their content) can be viewed as being comprised of a series of interlocking units or 'complex, unit driven networks' (2006: 8). This work in particular helped in thinking of temples as units in a larger system and also influenced the notions of 'thought junctions' and 'behavioural memory of objects' outlined below.

At the heart of the playthrough method is an attempt to note the type and number of choices available to the player as they traverse the playspace. These choices range from the more obvious, such as direction (when entering a room with two exits, for example) or options in a dialogue tree, to slightly less obvious instances of choice. Specifically, these more obscure, or less conscious, instances concern weapons to use during enemy encounters and actions in relation to the negotiation or manipulation of environmental objects (such as walls, ladders, ropes and levers in the dungeon) and

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[102] Their paper, 'game analysis: Developing a Methodological Toolkit for the Qualitative Study of Games was published in the first issue of the sixth volume of *Gamestudies*, December 2006 (the first online journal for the study of computer games).

personal items (catapult, boomerang, potions etc.) held by the player's character, Link.

While a loose, informal playthrough (producing diary notes on geography, topography, narrative, characters, puzzles, acquired items etc.) was undertaken for the entire game, a single one of the game's temples has been focused on for the main, formalised task, with *Ocarina*'s final regular example (the Spirit Temple) chosen. The reason for choosing a temple is simple: they contain most features of the game as a whole, but in a compact, condensed form, allowing for a focused analysis. The reason for choosing the final temple in particular is because of its richness: on the whole, temples become increasingly advanced in *Zelda* games - with the games' producers increasing the complexity of all previous designs and thus placing demands on the player to use all skills and knowledge gained thus far. The Spirit Temple is further interesting because it needs to be accessed by both 'child Link' and 'adult Link'[103] to be successfully completed. It should also be stated here that the playthrough method was also crucial for the exploration of Maslow's theories, with the supposition that some Maslovian needs can find satisfaction in the process of the navigation, particularly those allied to work, visual beauty and cognitive activity.

The cognitive playthrough generated four main findings that helped to shape interview questions and the interpretation of player responses. Firstly, the player experiences 'mental busyness' during play. There is a constant 'buzz' of cognitive activity in the negotiation of dungeon *playspace*. The buzz is louder at some times compared to others - for example in the solving of a discreet puzzle at one end of the scale and choosing a turning direction for Link at the other - but it is always audible. This mental busyness may be thought of in terms of Espen Aarseth's concept of 'non-trivial effort' (Aarseth, 1997: 1), noted in chapter two, and the concept of working memory, which I will discuss in chapter five.

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[103] While ostensibly a gameplay mechanic - the child Link can access small crawlspaces, for example- I believed that being made to use both a child and an adult avatar may have brought a consideration of issues and themes related to childhood and adulthood. For several of the interviewees, the game did have this effect, with Phil providing a particularly unexpected reflection: 'I'm fascinated by the idea of people who had to go off and fight in wars, you know as my Granddad did and stuff like that. And the idea that you get these people – quite often they're young and they have their innocence totally destroyed. And that came through to me in *Ocarina of Time* - that when he'd [Link] had that adventure and he came back to being a child, he wasn't really a child any more. He had his innocence taken away' (Phil: 16).

Secondly, the player experiences 'thought junctions' - a term for the moments in the negotiation of space where choices are required. The term 'thought junctions' is more suitable than simply 'choice', as it highlights that the player experiences many instances of not especially obvious choices, but ones regarding negotiation of space where the selections are seemingly intuitive and may not be consciously recognised as such. Thirdly, the player retains a memory of objects' behavioural properties. In order to progress effectively, the player has an awareness of objects' properties - say, of one type of stone over another (one can be pushed, another cannot) - and these memories may stem from much earlier point in the game.[104] Fourthly, the player sustains a mental topography. There is a constant awareness - without reference to the map - of the overall negotiable space of the dungeon. There is also awareness of dungeon and overall game objectives, and story. While this awareness is often at a secondary level, with immediate matters of negotiation maintaining precedence, it is always there.

The playthrough was part of a two-staged methodology, the results of which helped to structure the rest of the research process by operationalising some of the concepts in the study. An example of this process of turning concepts into tools can be seen in the case of the cognitive needs. Here it is operationalised as challenge and characterised as a combination of these four concepts. This enabled me to gain focus on what those challenges are and what they feel like to players, how in the process of responding to them, for example, flow ('…the state in which people are so involved in an activity that nothing else seems to matter' (Csikszentmihalyi: 2002: 4)) is experienced. The fruits of this playthrough informed not only the interview design, but also the discussions in chapter five. For illustrative purposes, an excerpt from the playthrough - the full text of which runs to over 17, 000 words - comprises appendix 7.

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[104] This awareness of objects' properties and other areas of the game resonates with Ian Bogost's concept of *Unit Operations* discussed in his book of the same name. In it, Bogost suggests that games (their spaces, their content) can be viewed as being comprised of a series of interlocking units or 'complex, unit driven networks' (2006: 8).

1.2 *Method Two: Interviews*

In depth qualitative interviews, both electronic and face-to-face, were employed alongside the playthrough in order to access the subjective experiences of *Ocarina's* players. The computer game is a complex form and a conversation with its audience is central to gaining an understanding of it. The first consideration was how to generate a sample of *Zelda* players with which in-depth interviews could be conducted.

Historically, playing console AAGs - of which *Zelda* is an example - and, the closely related, RPGs has, as noted above, largely been designed as (and viewed as [105]), a solitary pursuit[106]. Even in the current gaming climate, with the move to mass online connectivity, in the case of AAGs and RPGs, games designed for the single player still dominate[107]. Indeed, of all fourteen of the *Zelda* titles released to date[108] only four of them offer any sort of in-built multiplayer experience and only one of those offers it as anything other than an added extra.[109] *Ocarina of Time* is, *in design at least*, a solo game. This meant that there was not an organised group or club of *Zelda* players to be contacted. However, although *Zelda* players did not appear to gather together publicly, in physical space, they do congregate in cyberspace where there are forums, or message boards, on dedicated *Zelda* websites. My first strategy for generating a sample was, therefore, to use the internet.

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[105] As will be seen in the following chapters, in actual fact, this was often not the case, with single player games played co-operatively with others, usually family members and friends.

[106] The earliest console adventure game is, appropriately enough, generally considered to be Warren Robinett's *Adventure* for Atari's *VCS* console. This is single player only. The AAGs and RPGs released for consoles up to and including the generation of host hardware for *Ocarina* were also almost exclusively designed for solo play. For instance, from of a total of fifty-one such titles released for Nintendo's *SNES*, only one, *Secret of Mana* (Square, 1993), allows for multiplayer, while the *Nintendo 64, Ocarina of Time*'s original host platform, only has only two*: Gauntlet Legends* (Atari Games, 1998) and *Pokemon Stadium* (Nintendo, 2000).

[107] There were eight RPGs scheduled for UK release at the time this research was being designed (April - May 2008). Only one of these - *The World Ends with You* (Nintendo, 2008), for the *Nintendo DS* - has a multiplayer element and this is for a small portion of the game – known as a 'minigame' - only. At the time of this chapter's first update (May-June 2011), the situation remained much the same with the only game in the top ten retail chart which could be classified as an RPG, Rockstar's *LA Noir* (2011), being single player.

[108] June 2011.

[109] The four games are, in order of release: *A Link to the Past and Four Swords* (Nintendo, 2002), *Four Swords Adventures* (Nintendo, 2004), *The Phantom Hourglass* (Nintendo, 2007) and *Spirit Tracks* (Nintendo, 2009). The second of these is the only wholly multiplayer game

This kind of research is relatively novel, something noted by Christine Hine: '…there is considerable anxiety about just how far existing tried and tested methods are appropriate for technologically mediated interactions' (2005: 1)[110]. In substantial mitigation, though, Hine also notes the richness of the Internet for social interactions and the need for researchers to try and find a method of harvesting them.

It was clear from the outset that the most populated area of the Internet should be chosen as the first point of contact: this would give the research not only reach, but also, it was presumed, diversity. While awareness of Internet *Zelda* groups had been gathered through general World Wide Web (henceforward, simply, 'Web') browsing, there was also awareness that the Web was not the *only* place where such groups may have existed and so research was undertaken to see where else they might be and if and how their populations equalled that of the Web.

At the time of the early research design in 2008, a Google search[111] revealed what appeared to be the most popular *Zelda* Usenet group to have 33 members as opposed to over 16,000 of what appeared to be the largest *Zelda* website.[112] Listerv had even less, with not a single *Zelda* group in existence in 2008. The web, then, as by far the most populated area was chosen.

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[110] The greater growth of the Internet since 2000, which at the time of the research design in 2008 was, in Europe, over 263%, eliminates some of the problems noted by Mann and Stewart, problems best summarised as 'the unrepresentativeness of current Internet access.'(2000: 31). The growth figures hail from Internet World Stats (http://www.internetworldstats.com/stats.htm) which are compiled 'from data published by Nielsen//NetRatings' (http://www.nielsen-netratings.com). It is also worth noting that British Government statistics show that in 2007, 61% of all UK households had Internet access: www.statistics.gov.uk

[111] Google was chosen for this search because it was and remains the most popular search engine with the widest search. Google was listed as the most popular Search Engine by several sources at the time of the research design. These sources included Neilson/Netratings and Internet information provider, Comstore. The latter shows Google to have received 61.6% of all US searches in April 2008. The next most popular was Yahoo, which, in the same period, only received 20.4%. (http://www.comscore.com/press/release.asp?press=2230) This bias towards Google is even more pronounced in the UK, with figures from the data collection service Hitwise showing the Search Engine to have to have a 73.9% share of searches, again during April 2008. http://www.hitwise.co.uk/datacenter/searchengineanalysis.php

[112] As at 22nd May 2008, the dedicated *Zelda* website, Legend of Zelda.com (www.legendofzelda.com) listed 16,514 members. At the exact time of access, (4.29 pm) 48 of these members were active on the site. At the same time, a search for the highest number of members in a dedicated *Zelda* Usenet group, (alt.games.nintendo.zelda) totalled 33 and the latest post was dated 26 March. Furthermore, only two of the ten latest 'topic summaries' were *Zelda* related.

As figures published by Internet market-share analysts, *Netcraft*, show, the number of websites has grown exponentially over the last few years, from 50 million sites in 2004 to over 165 million in April 2008.[8] Specifically regarding this research, a Google search[113] revealed that there were 'around 12,400,000' websites relating to *The Legend of Zelda*. The community aspect of the web deemed relevant for this project was 'forums', dedicated sets of pages within Websites that, like the Usenet and Listserv postings they superseded, allow for discussions of any number of topics.

Finding a population to study within the web, however, was far from straightforward. Two initial questions arose, namely, 'How many *Legend of Zelda* web sites are there?' and 'Which of these is the most popular?' It was important to access as many *Zelda* and *Ocarina* enthusiasts as possible. For, while the research was always intended to be qualitative rather than quantitative, I considered that the 18-36 age range (at that time, the largest sector of the adult market) would bring a richly textured expanse of data. Accessing a website with a large population seemed the best way of gaining a diverse sample without spreading the research across *all Zelda* websites, leading to unwieldy results. Targeting a large community also seemed the best way of budgeting for any respondent apathy; a low proportion of a large population would still, hopefully, be sizeable.

An immediate and obvious solution to determining popularity was in simply accepting the first site listed by the most popular search engine, which, at the time of writing, was Google. This initial solution, however, was based on an assumption that search engines rank according to popularity. They do, but by the popularity (or frequency) of what is known as *anchor text* rather than by how often the website has been visited. Anchor text is the 'clickable' text on a webpage, such as www.legendofzelda.com but it could just as easily be 'Number One Zelda Site'. A Webmaster - the title given to individuals who operate Websites - need only ensure that this anchor text appears as often as possible, either on other areas of the web or on his own site, to be assured of a high placing. In January 2007, owners of Google took steps

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[113] It is acknowledged here, however, that search engines may not give totally reliable results and this is discussed later in the body text.

to prevent the abuse of this technique, known as Google (or Link) Bombing[114], but historically anti-hacking measures do not stay in place long, and already more Google Bombs have appeared.[115] Also, while it would seem reasonable to assume that most attempts to manipulate search engine rankings are in the commercial sector (or sites heavily subsidised by advertising), the possibility that non-profit fan sites may do so, either to suggest status or to simply attract more visitors, cannot be dismissed.

Even if all Search Engines were not open to such positioning, and the other most popular - *Yahoo!*, *Altavista* and *Hotbot* - search engines all once allowed Link Bombing, then other, more accepted methods are available. Indeed, the science of Search Engine Optimisation, as it is known, has spawned a boatload of 'how-to' guides[116] Using Search Engines to find the most popular sites then, was flawed. However I contend that this flawed method was still the best, as the other two possible avenues for searching were even more hamstrung. The first alternative was to use 'metasearchengines'. These engines (the best known perhaps being *Dogpile*) combine the results of several (in the case of *Dogpile*, eight) others to give overall rankings. The problem here is, of course, that this method will still include results from possibly manipulated engines. The second, and final, alternative was to search specialist databases (such as *Athens*), but these are heavily weighted towards the academic and this would not have unearthed the actual players of the game that were needed.

Based on an assumption that most *Zelda* Webmasters would not have attempted to manipulate Search Engines, the following method, while flawed, was decided upon as the best way forward: to use the predetermined search term of '*The Legend of Zelda* Fansite' on the most popular search engines and meta-engines on the web and to then access all sites appearing on each engine's first results page. These sites were then to be subjected to a first sift and all those without a forum/message board were to be discarded. The remaining sites would be submitted to a second, final, sift and the site

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[114] Google announced the changes on their Weblog (or Blog) in January 2007.
http://googleWebmastercentral.blogspot.com/2007/01/quick-word-about-googlebombs.html
[115] One of the most discussed Google Bombs at the time of the research design was from January 2008 and involves linking to the Church of Scientology. The details are discussed here:
http://blogoscoped.com/archive/2008-01-29-n23.html
[116] For instance, a search of online bookstore, Amazon, using the acronym SEO, revealed 333 results in May 2008. At the time of this chapter's revision, in May 2011, it had increased to a staggering 15, 085

with the most members - those who had signed up to use the forums - would be chosen from which to draw the sample. [117] As will be discussed in a little more detail below, three *Zelda* sites were finally decided upon, and these were *thelegendofzelda.com*, *Legends Place* and *Zelda Universe*

Much of the methods literature notes the need to negotiate access to the population via 'gatekeepers' (Robson, 1993: 296), individuals who 'exercise institutional authority to permit or deny' it (Denscombe, 2002: 71). The gatekeeper in this case is a 'Webmaster', the person responsible for running a website. Whether their permission is actually needed, however, is debatable: usually fan-website forums - unlike those maintained by institutions such as schools and universities- are easily accessed by anyone and in practical terms at least, the need for permission is unnecessary. In order to be as transparent as possible about the research, however, it was decided that a request for permission, outlining the purpose of the research would be sent to the Webmaster. If the Webmaster granted permission, a similar outline and request for respondents was then to be posted in the forum, again making the purpose of the research as transparent as possible. All those who stated an interest and whose interest was relevant[118] were to be sent more details and - if still interested in participating - arrangements made[119].

Mann and Stewart (2000) note earlier successes with CMC interviews and this precedent encouraged a move towards what was already an attractive option. It was difficult to predict how many stages this interview would have, however. It was possible that there would be only one, but this was unlikely as some responses would no doubt benefit from clarification or follow up questions. It was, therefore, also difficult to

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[117] One other possibility did suggest itself, but was disregarded. This was to follow the above method for the first stage and then follow up any *Zelda* links within the sites, thus minimising the use of search engines. However, links to other sites are most often based on friendship or reciprocal advertising between Webmasters. As such, this may not have been any more reliable a method than using search engines. Even those websites that provided a 'top ten' listing may have used dubious or vague ranking methods.

[118] Those, for instance, who named *Ocarina* as their favourite instalment of *Zelda*, or those who claimed to play it regularly.

[119] Such arrangements were usually made over the course of several emails and to reprint them all here, or as an appendix, would be a little wordy as well, it is suspected, as rather tedious for the reader. Obviously, though, full details of all correspondence are available if needed. The interview questions comprised the final batch of mails.

predict an accurate time span for the interviews, as this would, to a large extent, be dependent on the interviewees' speed of response. Ideally, though, the whole CMC interview process would be fairly condensed, as a concentrated period would best maintain interest and momentum for the interviewees. In any case, before the interviews began, an informed consent form would be sent and signed by the participant. The email questions also formed the basis of the FTF interviews and a discussion of these questions forms appendix 6.

Only two minor drawbacks to this electronic approach arose. The first of these was that CMC interviews lack non-verbal information and other cues indicated by tone of voice and so forth. However, as noted by qualitative research scholar Jennifer Mason, even records of FTF interviews, with every precaution taken to try and record everything, are still incomplete: 'a transcription is always partial partly because it is an inaccurate record of non-verbal aspects of the interaction… and also because judgments are made…about which verbal utterances to turn into text and how to do it. For some verbal utterances there are simply no written translations!' (2002: 77). This drawback clearly involves a question of how to interpret responses. This issue, however, is always present for the researcher, whether the interviews are CMC or FTF. The second drawback was that the time available to the respondents - noted below as an advantage - may have encouraged interviewees to overly craft answers, rather than produce more spontaneous and, perhaps, more honest responses.

Despite these minor disadvantages, there were, however, three significant advantages to using this method. The first was depth. With the inevitable time pressures associated with FTF interviews removed, time could be spent following up on points made. Similarly, this method gifted thinking time to the interviewees, with responses carefully thought through and worded. A second key advantage was reach. With the Internet, the practical difficulties associated with FTF interviews were avoided and international boundaries posed no problems. A third advantage was the accuracy of the record, with no possibility of the interview being incorrectly transcribed.[120]

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[120] There are a number of reasons which may cause such a thing, but the most obvious would be poor sound quality and unintelligible comments.

Alongside CMC, I employed a second approach - primarily as a back up measure if the Internet failed to provide enough respondents. This involved contacting potential interviewees via a 'real world' appeal. The most obvious - and effective - way to do this was via leaflets and posters placed in specialist computer game retailers such as *Game*, *Gamestation* and *Grainger Games*[121]. I also leafleted a local cybercafé – *CGZ* An image of the leaflet is provided as an appendix (appendix 3).

2: The Process[122]

The most popular *Zelda* website at the time of the first web search was thelegendofzelda.com and so the webmaster was contacted[123] and the first post made.[124] It became clear after a short time that this website alone was not going to garner the number of respondents required[125] and so the second and third most popular sites were contacted - *Legends Place* and *Zelda Universe*. No response came from *Legends Place*, but several came from *Zelda Universe*. There was a piece of fortune from the latter, as one of those interested in being interviewed - Michelle, whose narrative features in chapters four and five, - also held a position of authority and respect within the community and arranged for the initial post requesting interviewees to be moved into a more populated area. She also posted a comment herself, urging members to respond.[126]

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[121] Unlike the other retailers, *Grainger Games* is a chain serving only the North-East of England and this is perhaps an appropriate point to note that work commitments and, to a lesser extent, cost, limited possible travel distances, but Newcastle-Upon-Tyne, a city close to home, was seen as offering a good demographic mix: it is a large city with a population of over a quarter million (http://www.statistics.gov.uk/census2001/pyramids/pages/00cj.asp), two universities and many computer game stores. There was also awareness that reach was covered to a certain extent by CMC.

[122] The process discussed here is for the empirical section only, the process for the playthrough having been discussed earlier.

[123] All initial emails and forum posts - to webmasters and potential interviewees, including those regarding *CGZ* - are provided as an appendix, appendix 2

[124] The date of this web crawl and email to the webmaster was July 28th 2008. When, by August 5th, no response was forthcoming, another email was sent, stating the intention to make an initial forum post - requesting volunteers for interview. On August 7th, the webmaster responded, giving his blessing to my use of the forums.

[125] There were a total of eight responses from thelegendofzelda.com. Two of the respondents were under the age of eighteen, and could not be used, and five dropped out before the interview process proper began, leaving only one who remained for the full interview process.

[126] Michelle's email is printed here, verbatim:

It was a result of this respondent's help that more members volunteered themselves for interview. In the event, all but one of the five CMC interviewees were recruited through this website.[127] Michelle, then, can be seen as an unofficial, and unexpected, form of gatekeeper, one who, while not granting access as such, enabled *smoother* access, and encouraged response, by legitimising my request for it. With Michelle's support and the high number of forum members at this site, the still limited number of responses was a surprise. The consequence of this was the realisation that real world recruitment was necessary and so what was originally envisaged as a contingency measure became a somewhat essential one.

The recruitment method of leafleting - once planned as a failsafe - proved to be the most successful, in terms of numbers. It became apparent after several weeks that the Internet would not prove to be as rich a source and so leafleting was undertaken. As planned, in addition to computer game retailers (*Game*, *Gamestation* and *Grainger Games*), *CGZ*, one multimedia store (*HMV*), two comic book shops (*Forbidden Planet* and *Travelin' Man*) and the Student Union buildings of the city's two universities (*Newcastle* and *Northumbria*) were also targeted. When possible, permission from the store managers [128]- or acting managers - was sought and when permission was granted[129], twenty leaflets were left. The decision to target shops additional to computer game ones resulted from my belief that computer game players may also be interested in other aspects of popular, or media, culture, something supported by recent studies of fan cultures.[130]

Most CMC interviews were held over three to four cycles of emails, while each FTF interviews lasted between sixty and ninety minutes. The interview questions were

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I made another thread on zu asking for people to help you out. Your first thread got thrown into the 'advertising' section (where no one ever goes :P). I thought you deserve more respect and help than that, so I (as a well-respected long-time member) thought that people may take it more seriously coming from me.

[127] The exception is Mike, who was recruited from Legendofzelda.com.

[128] These managers were the 'Gatekeepers' in the case of this method, though as discussed earlier in the body text, formal gatekeeper procedures were not entered into.

[129] While only one store refused permission outright, giving reasons of policy, others, though agreeing, seemed reticent. Ultimately, all FTF interviewees bar one hailed from the *Travellin' Man* comic shop. The exception, Sam, responded to a leaflet collected from *CGZ*.

[130] The work of Henry Jenkins, in particular, inspired such a belief, especially his book, *Fans, Bloggers, and gamers: Essays on Participatory Culture* (NYU Press, 2006).

created for the CMC interviews first, and while slightly adapted to the rhythms of conversation, they remained much the same for the FTF ones. In terms of ordering, and following Robson's note that '…research has not to date suggested any general rules to order questions, beyond the suggestion that general questions should precede specific questions.' (1993: 249), personal questions were asked first, (which also followed Robson's advice that 'initial questions should be easy and interesting' (1993: 250)). These were followed by questions on early memories of computer games, questions regarding the *Zelda* series generally, and then questions regarding *Ocarina of Time* itself.

As to the form of questions, all of them - excepting those requesting basic personal data – were *open* and fell into one of the following of Bertrand and Hughes' categories: 'reasons why questions', 'opinions/values questions' and 'feeling/behaviour questions' (Bertrand and Hughes, 2005: 73). In forming the questions there was an awareness of the need to be sensitive to certain criteria. For instance, in order to gather information on the relevant areas, specific questions needed to be asked but it was also necessity to avoid *suggesting* answers or, to quote Kim Schroder, to 'watch leading or loading' questions (Schroder *et al*, 2003: 262). To this end, what might be classed as Maslovian keywords such as *happiness, achievement, satisfaction* and *fulfilment* were avoided. There was also a need to make the questions easily accessible by using the plainest language possible. While appendix 6 contains all of the first phase[131] questions, it is worthwhile noting a small sample of them here, along with explanations of the thinking which informed them. These questions are all part of a sequence regarding *Ocarina* itself:

Okay, I'd now like to start talking about *Ocarina of Time* in particular.

- Can you talk me through your early relationship with this particular game – when and how did you first discover it, at what age and what were your first impressions of it?

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[131] Subsequent questions were formed on the basis of individual interviewees' answers to these first phase questions. FTF interviews of course differed from CMC interviews in that questions were immediately followed up during this first phase.

This is an attempt to uncover the context of *Ocarina* in interviewees' lives. In particular, I was interested in how they discovered the game, whether it was, for instance, recommended by a friend, brother or parent. While some of the thinking behind this was to ease interviewees into more specific questions there was also a desire to determine if there was a common age of discovery and if so, what may be inferred from it. If for instance, the game was discovered at a young age, then issues regarding childhood - or childlike tendencies (linking to not only Maslovian theme of spontaneity but also those in the literature of developmental psychology) would be there to explore. The question regarding first impressions was designed to prompt interviewees to think about the game anew: to identify what they saw as its initial appeal and, if they saw it in such terms, its singularity. This question was underpinned by thinking of Maslovian higher values - such as aliveness, uniqueness and playfulness.

- When you start a new game, how do you name your file? Do you, for instance, use you own name or another. Can you explain reasons for your choice?

These questions specifically relate to role-play, identity and views of games as either ludic or narrative based experiences, as discussed in chapter two. The thinking was, for instance, that if interviewees use a role-neutral label for their file (such as something purely numerical: *File1*, for instance) then this could be an indicator of the game being a purely instrumental, procedural experience for them; whereas if they used Link, or their own name, then it may be understood as a narrative based experience, with, perhaps a deeper meaning being attached to the play. The Maslovian notion of self-esteem, Bettelheim's theory of the fairy tale, and the notion of immersion underpin these questions.

- I think we've established from our earlier, initial contact that you've played this game more than once. Here, I'd like you to tell me, if you can, how many times you've played the game and what it is about the game that makes you return to it.

Here I believed that something of significance was to be gleaned from how often *Ocarina* is replayed: namely that the interviewees wanted to experience again the

satisfactions that were gained through its play, for as Maslow noted, 'Man is a perpetually wanting animal' (1943: 371). This question was also designed to raise interviewees' consciousness of the game's appeal, so they would be able to articulate their understanding of why they keep replaying it. Determining this appeal is, of course, a key element of this research, so most of the following questions in this section were designed to focus further on this.

- When you play the game, are you able to concentrate fully?

This question clearly concerns immersion and it has hopefully been phrased without being 'leading'. It was hoped that interviewees would expand considerably on this point, noting what it was that disturbed their concentration or, conversely, what they thought it was about the game that maintained their concentration.

- Do you have a favourite part or favourite *parts* of the game? If you do, please tell me what/where they are and, if you can, please explain what it is that makes them so popular with you. Similarly, if you don't have favourite sections, are you able to tell me why this is the case?

I'd now like to start focussing in more on certain particular aspects of the game.

- Do you have a favourite part of the overworld? If you have, I'd very much like your thoughts on it – can you say what you like about it so much? You might like to think about the feelings you experience when playing through this section or the particular actions you indulge or anything else that comes to mind?

- Do you have a favourite dungeon? Again, if you have, I'd very much like your thoughts and feelings on it. Can you say why you like it so much?

- What are your thoughts on *Ocarina*'s story? I'd like you to think about the part it plays in your playing experience.

- Can you describe how you feel on 'completion'? By completion I don't necessarily mean the whole game. I mean it to refer to completion of a dungeon, a particular segment of the game *or* the game as a whole.

All of these final questions of the section are indebted to both Maslovian themes and the cognitive playthrough. Ideas of beauty, the presence of story elements, notions of

busyness, challenge, cognitive need satisfaction, justice, order and completion underpin these questions and it was hoped they would open up a wide discussion of these themes. While, for obvious reasons, the accurate recording of email responses did not pose any problems, the FTF interviews were recorded with an analogue recorder. The tapes were stored as encrypted files on my home PC. The interview process extended over a six month period. The first CMC interview occurred on September 4[th,] 2008, and the last, October 9th 2008. The interviewees ranged in age from 18 to 33. All of the CMC interviewees were from outside of the United Kingdom: two from the United States, one from Canada; one from Norway and one from Australia. The FTF interviewees all hailed from the North East of England, being born and/ or resident there and all but three of the interviewees were students. Interviews were conducted with individuals, except in the case of Dean and his partner, Lesley, both *Ocarina* players, who were interviewed together. While a fuller, schematic, summary of interviewees comprises appendix 5, the table below features the core information:

Interviewee Name and Gender	Age	Location	Occupation	Form of First Contact	Interview type	Date of First Contact	First and Last Dates of Interview
Alan (M)	23	Newcastle	Student	Leaflet	FTF	20/12/08	21/01/09
Andrew (M)	19	Newcastle	Student	Leaflet	FTF	17/09/08	18/09/11
Colin (M)	22	Sunderland	Student	Leaflet	FTF	20/09/08	30/09/08
Daniel (M)	20	Newcastle	Student	Leaflet	FTF	02/11/08	11/11/08
Dean (M)	22	Durham	Student	Leaflet	FTF	15/01/09	11/02/09
Dom (M)	27	Oslo (Norway	Student	Internet	CMC	4/09/08	14/09/08 20/09/08
James (M)	18	Mississippi (US)	Waiter	Internet	CMC	02/09/08	04/09/08 14/09/08
Lee (M)	18	Newcastle	Student	Leaflet	FTF	01/03/09	25/03/09
Lesley (F)	24	Durham	Student	Leaflet	FTF	15/01/09	11/02/09
Michelle (F)	24	Ohio (US)	Radio DJ	Internet	CMC	02/09/08	12/09/08 15/09/08
Mike (M)	19	Alberta (Canada)	Student	Internet	CMC	06/09/08	24/09/08 08/10/08
Phil (M)	33	Newcastle	Publishing	Leaflet	FTF	13/09/08	23/09/08
Sam (M)	18	Gateshead	Student	Leaflet	FTF	30/10/08	18/11/08
Tim (M)	18	Perth (Australia)	Student	Internet	CMC	03/09/08	03/10/08 09/10/08

Table 1: Interviewee Details

It is clear from the table above that the sample generated was in no way representative of the population at large, or the population of *Ocarina* players; the age-range was narrow, the gender mainly male and most were students. However, lack of representativeness is not an issue in this research, as its key purpose is not to generalise

but to explore gamer *subjectivities*, allowing the prosocial, positive benefits of gaming to gain a voice. In the words of Mason, a sample such as this '…is meaningful theoretically because it builds in certain characteristics or criteria which help to develop and test' the theory that computer gaming can have prosocial and psychologically beneficial effects (Mason, 2002: 93-94).

The data generated by the interviews was subjected to a thematic content analysis. An effort was made to tease out as many meanings as possible and this was done by firstly finding grounded themes, beginning with notes in the margins, or 'marginal remarks' (1994: 67). From this initial teasing, categories within which to place the data were created, some directly Maslovian in inspiration and in essence (beauty, environment, curiosity, completion, richness…), some not, or at least not obviously so (fandom, hesitancy, ownership, gaming institutions…). In all, there were fifty eight of these, and they were often intertwined. They ranged from the seemingly humdrum (game packaging) to the quite exotic (the perception of game consoles as living entities). The full list is given as a footnote below.[132] After preliminary investigation, an attempt was made to re-categorise under more encompassing, themes and these were as follows: Activity; Aesthetic properties; Childhood Psychology; Memory; Moral and Social; Context of game and Gaming; Virtuality and Immersion, all of which had some Maslovian resonance.

Quotations from interviewees were then collated beneath each of these headings and an analytical comment written on each. Once this process was completed, there was a return to the original hypothesis of the thesis - that the computer game could bring psychological benefits to its players. In order to determine this, Maslow's concepts were

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[132] The list of initial categories in all of its inelegance is as follows: Ability; Abundance; Achievement; Aesthetics; Age; Beauty; Breaking the game; Childhood community; Completion; Computer game literacy; Console as living entity; Control; Criticisms; Effect/influence of computer games; Emotion; Engagement with characters; Environment; Expectations of Zelda game; Exploration/ curiosity; Family; Fandom*;* Financial; Game-related objects in the real world; Gender; Hesitancy; Identity/ naming; Importance of games; Intensity of feelings; Interviewees' description of their relationship with the game; Marketing; Memories; Morality/moral influence; Music; Negative views of controller/ interface; Nintendo; Nintendo love; Objects; Oddities; Other; Packaging; Perception of computer gaming by others; Physical effects of game; Physical memory; Physicality; Place; Play; Player choice; Pleasure; Private ownership; Real world activities/ actions computer games have inspired; Reported speech; Richness; Story; Target audience; Time; Unique properties of computer games; Use of game items; Wider gaming institutions.

operationalised, meaning that each of the key need categories discussed in chapter one (love, belonging, esteem, beauty and intellectual stimulation) became firm classifications under which the data could be placed and considered. If there were positive prosocial effects of computer gaming, here is a framework of concepts which allows them to gain expression and within which pattern, order, and meaning can be identified. Using this operationalised framework of concepts, the data, the categories and the analytical comments were sifted again; this time for instances that either confirmed the thesis or - just as importantly - denied it. Once collected, the data and comments - both supporting and otherwise - were amalgamated under the two major themes of basic need satisfactions and higher need satisfactions and these formed the basis of chapters four and five.

3: Ethics

 Every attempt was made to ensure sound ethical practice, with the Social Research Association's (SRA) 'Ethical Guidelines' (2003) and the British Sociological Association's (BSA) 'Statement of Ethical Practice'(2002) being touchstones throughout the interview process. There were two parts to the ethical practice for this research – that which concerned the face to face interviews and that which concerned the CMC interviews. While there are obvious similarities between the two, such as ensuring the wellbeing of interviewees, the gaining of informed consent and the safe and secure storage of data, there are also important differences and these are discussed below.

As regards the face to face interviews, computer game shops, comic shops, a cyber-cafe and Student Union buildings were leafleted in the Newcastle area. The leaflet - comprising appendix 3 - requested interviewees. Those interested, contacted me via the email address provided. Once this contact had been made, arrangements for interview were organised. Ensuring the well being of participants was extremely

important and so safe, well-populated locations were offered[133], as were expenses. Such a location would also allow for a level of self protection, something noted as part of BSA's concerns regarding professional integrity. While the question of using children in the research was dismissed from the outset - the research focused on computer Gaming's largest audience, 18-34 year olds [134]– there was always the possibility that some respondents would still be classed as vulnerable members of society[135]. However, even in the design stage, it was felt that this research was of a nature that would not put such people at risk and in the event none of the respondents fell into this category.

Denscombe calls informed consent 'a benchmark for social research ethics' (2003: 183), and Mann and Stewart place it 'at the centre of the research process' (2000: 47). In terms of FTF interviews, this did not pose any problems at all and hard copies of consent forms were signed prior to all interviews[136]. While noted on the informed consent forms, all interviewees were also told orally that they could stop the interview process at any time.

For the email interviews, *Zelda* players were recruited for interview via website forums. As already noted, an initial email was sent to the 'gatekeeper' or webmaster. This email provided details about myself, the purpose of the research and requested permission to use the forums as both a general resource and as a means by which to contact members (for email or FTF interviews). This request was a courtesy, rather than a necessity as the forums are to all intents and purposes public domain. This did, however, ensure from the outset that all involved in the research, however indirectly, were fully informed.

The next stage was placing a 'post' on the forum. This provided details about me; outlining the purpose of the research and requesting volunteers for interview. The request was for both CMC (email) and FTF interviews, depending on the proximity of

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[133] It is acknowledged that despite choosing a safe place, even travelling can be viewed as increased risk to the interviewee. This could however, reasonably be seen to be beyond the control of the interviewer.
[134] While this is the key reason for choosing the age range, there was also the desire for well articulated responses, which may have been less likely with interviewees younger than the lower limit.
[135] Signs of such vulnerability may have been visible in the first responses, of course, and in any such cases, and at that stage, the process would have been halted.
[136] In the interests of full disclosure, it should be noted that the Consent Form of one FTF interviewee was completed post interview, in the same manner as for CMC interviewees discussed in the body text. This was down to researcher error (the failure to pack a form in that night's interview kit).

gamers to me, though in the event no FTF interviewees were gathered from Internet sources. My email address was provided to any who wished to participate.

The prospective interviewees (selected from the respondents to the initial post) were sent an informed consent form via email. This noted the aims of the research and included details regarding respondents' privacy, storage of material and dissemination of findings. Once the informed consent forms were returned via the method noted in the main body text of the chapter, the process of CMC interviewing began. The informed consent form comprises appendix 4.

The signing of CMC informed consent forms initially presented some difficulties, however, and the BSA was correct in noting that 'ethical standards for Internet research are not well developed as yet' (2002: 6). The form for CMC interviewees could not be signed in writing in person, so instead an alternative system suggested by Mann and Stewart was adopted[137]: participants printed out the emailed consent form, signed it, electronically scanned and returned it. The choice to return it electronically or physically via traditional post was offered but all opted for email. The consent form for both CMC and FTF interviews was identical.

The data for both FTF and CMC interviews was stored on two firewalled and password protected personal computers - one desktop and one laptop - and on backup devices (USB, or pen, drives) which did not leave my home. Once the data was in hard copy, it was suitably anonymised and any unwanted copies (because of misprints and mistypes etc.) were cross-shredded.

4: Evaluation

While it was certainly necessary - for the sake of integrity - to ensure that the Internet was accessed in as unprejudiced a way as possible, with hindsight a more comprehensive targeting of *Zelda* websites other than the most popular and populated may have garnered a greater response: the more web forums targeted, the more *Ocarina* fans would have seen - and perhaps responded to - the request for participation. On

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[137] There is precedent for such a method. Mann and Stewart noted its use in a 2000 study (2000: 50), passed by the ethics committee of a researcher's institution.

reflection, the CMC stage would have been completed after the FTF stage, as the more natural flow of the latter interviews opened up even more areas of discussion than had been imagined. These areas would have been filtered into the electronic interviews and further sections of interview therefore undertaken. That said, however, an attempt was made to keep the email interviews as organic and fluid as possible, with them usually completed in sections, and shaped according to first responses. A greater attempt should also perhaps have been made to engage web respondents in forms of communication other than email, such as Internet Messaging and *Skype*. The former was attempted with one interviewee - James - but three attempts fell through, and so it was abandoned as a whole, the general conclusion being drawn that this was something not desired by Internet respondents.[138] In regard to the contacting of potential interviewees, with the leafleting being so successful, this should perhaps have been much more part of the process from the beginning. In order to generate a larger number of responses, the leafleting should also have perhaps spanned a larger area, taking in all nearby cities (Durham, Sunderland and York).

The number of female respondents comprises only a very small portion of the sample: just two of the fourteen interviewees are women. It is true that numbers of male gamers did once massively outweigh their female counterparts, but more recently this has changed. As noted in *From Barbie to Mortal Kombat* (Cassel and Jenkins, 2000), the first academic book designed to 'address the experience of girls'(2000: 5), female gamers once 'made up no more than 25 percent of the market' (2000: 10) but as the decade progressed, that figure began to rise. In the words of computer game scholar, Dianne Carr, in reference to a 2004 study by Aleks Krotoski, 'More males play than females but only in certain countries and only certain genres' (Carr *et al*, 2006: 163). Indeed, figures quoted in the year I began my interviews, also noted an increase in female gamers - an increase to 38 percent generally - with even higher figures for certain niches (a rise of '42 percent for online games…', and female players being 'an equal or dominant presence in some massively multiplayer online games' (Kafai, *et al*, 2008: xiii)).

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[138] While the reasons may well have been genuine (helping someone with a vehicle breakdown and two work shift reschedules), there was a feeling that the interviewee did not want to communicate in this way.

One possible reason for this lack of female respondents could be down to the year *Ocarina* was originally released -1998 - around the time that females accounted for only a quarter of the market. After all, almost all of those interviewed did first play *Ocarina* for the first time close to its original release date. Such a theory does not, however, seem likely, as almost all of the interviewees had also played earlier incarnations of *Zelda*, which they often discovered *after* first playing *Ocarina*.

Perhaps, then, the lack of female response can be attributed to something simpler than figures and ratios, namely that the research was being undertaken by a male researcher, and potential female interviewees did not want to correspond with an unknown male, especially in regard to FTF interviews. This may, for example, have been the reason for Lesley's attendance at the interview with her partner, when initial arrangements were made for her alone.[139] Also, one potential FTF interviewee dropped out of the process completely after the first response, and while it may have been for another reason, it may also have been because of such a concern.

The age range of respondents is heavily weighted towards the lower end of the age scale. For example, four of the interviewees are eighteen years old and only one respondent - Phil - is over twenty four years of age. While, as noted in the discussion on accessing the website sample, above, this was initially considered problematic, as it was believed a diverse sample would bring richer results than otherwise, it was also not entirely unexpected for, as noted in chapter two, Nintendo games have historically been targeted towards younger players.

The occupation of interviewees too was concentrated in one particular area, with all but three involved in full time higher education. The occupation of gamers is something which has received very little attention, which is surprising considering the amount of quantitative data which *is* available on other areas. [140] That said, perhaps the numbers should have been expected as almost fifty percent of 18-21 year olds in the UK (from where the majority of the interviewees hail) were, at the time of the research,

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[139] In the event, this has proved beneficial to the research, as her partner, Dean, was also interviewed and his responses are extremely rich.

[140] The website http://www.onlineeducation.net/videogame provides a clear snapshot of such data, which ranges from numbers of 'new' gamers to average playing time, but does not extend to a breakdown of occupations.

involved in higher education[141] and such an age group forms part of gaming's largest audience. In addition to simple ratios, the large proportion of student responders may also be due to the fact that students may have the time available to become involved in such a research project.

However, as noted earlier, while the limits of the sample are acknowledged such limits are not vitally important here (although the specificity and composition of the sample is critically reflected upon in analysis), as the research is intended to explore subjectivities of those involved in a rather obscured and even stigmatised activity. The rich data the interviews provided allowed for this '…close-up, detailed and meticulous' view (Mason, 2002: 92).

Conclusion

The aim of the thesis is to discover if and how playing computer games brings its players any social-psychological benefits and engenders prosocial effects. I aimed to do this in relation to a specific game object, and social and cultural context. To this end, a two-staged methodology was employed, involving a cognitive playthrough of *The Legend of Zelda: Ocarina of Time* and in-depth qualitative interviews with its players. The playthrough, focusing in detail on one particular portion of *Ocarina*'s virtual playspace - the Spirit Temple - allowed a detailed understanding of the play process. The playthrough brought an awareness of how narrative and play interlock in the play experience - or in the 'gameplay', as defined by Egenfeldt-Nielsen, Smith and Tosca (2008). It also brought an awareness of the way players respond to intellectual challenges in the playspace, from initial perception of a problem, to its possible solutions, to the effect of the eventual actions, to the feelings of 'flow' (1975; 1990) and Maslovian satisfactions such responses bring. Understanding of this flow and mental busyness experienced by the player allowed me to design interview questions and interpret interviewee responses with an understanding of engagement with the virtual playspace that would not have been gained from any other method.

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[141] http://www.bis.gov.uk/assets/biscore/statistics/docs/p/participation_rates_in_he_2009-10.pdf

Players of the game were contacted and interviewed via electronic and traditional means. While the combination of the two interview techniques was not originally envisioned, both forms of interview yielded extremely rich material. The FTF interviews allowed for unexpected and extended reflections down highly fruitful avenues and the email correspondence, while not generating as much material, allowed for a thoughtfulness and precision of expression often difficult to achieve orally.

There were limitations, however: not as many interviewees were generated (by either method of contact) and subsequently, not as diverse a sample was gained. These limitations must inform a critically reflexive reading of the data and the conclusions that can be drawn from it. It should be clear that generalisations cannot be made as a result of the research: whatever the findings, they cannot be categorically applied to all computer game players or even all *Ocarina* players. Such generalisations were not, however, the purpose of the research. Instead, the purpose was to employ in depth interviews to illuminate an area of social experience that has hereforeto remained somewhat stigmatised and obscured, namely computer gaming, 'perhaps the only modern adult pastime that is still occasionally misunderstood' (*Edge* #109: 55).

The findings *can* therefore show two important things: firstly, if and how *Ocarina* has brought benefits to these particular players and secondly, the usefulness of this method in discovering such benefits. The success of the latter opens up the possibility of future, possibly wider, research using the same methods. Also, and equally importantly, the research was designed to allow for varied, often conflicting, narratives to emerge, and the data was interrogated from all angles: as will be seen in the following two chapters, interviewee testimony which does not support prosocial effects - as well as the testimony which does - has been fully reported and discussed. For while the research was designed to explore the potential for positive effects, I did not want to be blinded from negative effects, or from aspects of the experience that do not fit into the framework that Maslow offers.

With regard to the findings, while all of the data proved interesting and often surprising, most unforeseen was the extent to which early memories and home life was discussed and much of this material formed what became chapter four. All of the interview data, in fact, is discussed in chapters four and five, the former analysing the

findings in relation to Maslow's theory of basic needs, the latter in relation to Maslow's theory of higher needs. Findings from the cognitive playthrough also heavily inform discussions in those chapters, especially in chapter five. The close grained, step-by-step nature of the playthrough forced an acknowledgment and appreciation of *Ocarina*'s aesthetic properties. Such an appreciation acted as an essential anchor, or core, around which interviewee comments could be considered. It is likely that this playthrough, or an appropriately adapted version of it, will serve the same highly fruitful purpose for any research involving a particular computer game and its players.

Chapter Four

Basic Needs and Domesticated Computer Game Technology

Introduction

This chapter begins by considering interviewees' earliest memories of computer games. The first section will note the importance of computer game technology in helping to create secure, loving environments and relationships in the interviewees early years. The chapter will then consider how attempts were made by interviewees' parents to use computer games to stimulate their children's cognitive development. I turn to the work of computer game scholar John Paul Gee to illustrate the value of such parental attempts. Following this, the chapter considers the role of the computer game in helping to form social bonds beyond the family, with peers, friends and partners. This leads to a discussion of 'esteem' and I will note how the social web which extends from computer game play can help satisfy this Maslovian need. The chapter will then briefly contemplate the social importance of computer game technology in the world beyond the home before offering a summation of the discussion in Maslovian terms.

While *Ocarina of Time* can now be accessed and played via a variety of means[142], the game was originally played by all of my interviewees on Nintendo's *N64* games console which, like all non-handheld games consoles before and since, is attached to a standard television set via cables. Noting this may help evoke the notion of socially embedded or domesticated technology, 'a way of thinking about the incorporation of technology into everyday life' (Silverstone in Berker *et al*, 2006: 229) and discussed in chapter two. This notion will be discussed throughout this chapter.

Maslow's wording for some of the basic needs have been used, in modified form, to head this chapter's main sections. Hence Security and Love (a merging of Maslow's 'Safety and Security' and 'Love and Belonging') forms the first main heading for the data discussion, 'Esteem', the second; and a conflation of them all - 'Security,

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[142] *Ocarina* has been released for three more consoles since its initial release, including, in June 2011 in handheld form for Nintendo's *3DS*.

Love and Esteem' - for the final. In both this and the following chapter, anonymised interviewees' names, and the page number of the emailed or transcribed interview narrative from which the quotations are taken, are in brackets following excerpts.

1: Security and Love

Maslow notes that once the basic physiological needs - food, water, shelter - are met, then the basic social and emotional needs, such as love and security, take precedence. Maslow makes this point in the early pages of *Motivation and Personality*: '…when hunger was foremost, love seemed unreal, unnecessary and unimportant. Now the pangs of loneliness, ostracism, rejection, friendlessness and rootlessness are preeminent.'(Maslow, 1954: 20) and later notes that these needs 'can only be satisfied interpersonally.' (1954: 97). This section explores the satisfaction of these needs in relation to interviewees' discussion of the earlier interview questions, which can be found in appendix 6.

1.1 *Security and love: Family*

For all of the interviewees, the family home, during childhood, is where computer games were first discovered. For most, this is also where *Ocarina* in particular was first encountered. All interviewees speak not only of this initial contact but also of the immediate social context and social interaction it inspired. Occasionally, the references are made in passing and resist too deep an interpretation but more often than not, they are more considered comments and are important in highlighting familial closeness, affection and love, the denial of which, Maslow sees as 'basic in the picture of maladjustment' (Maslow, 1954: 21). Alan, a twenty three year old philosophy undergraduate at large university in North East England, and nineteen year old Mike[143],

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[143] Mike also notes that his first encounter with *Zelda* itself was intrinsically linked to memories of very early childhood and parents:

> My first encounter with the *Zelda* franchise was during my toddler years. *The Adventure of Link* was in my parents' collection of games and I played it regularly. (Mike: 1)

a game design student at a Canadian technology college, draw attention to this point very early on in their interviews. They both note a physical, almost umbilical, connection between the playing of games and contact with their fathers:

> First gaming I can remember doing was, er, if this isn't too much of a cliché, sitting on my dad's knee, er, playing games, the names of which I've completely forgotten. (Alan: 1)

Mike, who suggests a significant personal influence of computer games ('from my chosen career path [to] passion for creation (Mike: 1)), notes the following:

> Video games have been part of my life since I was just a lad on my father's knee. Our family owned a *Nintendo Entertainment System*, which I would play with my dad until I was able to continue on my own. (Mike: 1)

Another interviewee, Andrew, a nineteen year old computer science student from Newcastle, also notes that his first encounter with *Zelda* itself was with family, his comments again highlight the conflation of family - particularly family closeness - and gaming:

> The first *Zelda* game I played at all was the very first one. Of course I was probably like five years old at this point and so...so I didn't play a lot of it. I can remember my uncle playing it a bit and kind of watching him and playing various bits of it. (Andrew: 1)

It was also Andrew's father who brought the console into the home, 'because I was at that age' (Andrew: 3). Dom, an email interviewee from Oslo - and due to begin a composition degree at a large North American university[144] - also places parents at the heart of his first gaming memories. Also of relevance is the fact that computer game play was at the centre of his sixth birthday celebrations, emphasising the *NES*'s role as a locus of social activity:

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[144] As with several of the interviewees, Dom's career ambition was directly influenced by his love of games: '[I] wish to become a composer of computer/console game-music' (Dom: 1).

> I had young parents, and they bought the Nintendo 8 bit when I was 5 years old, almost right as it came out in Norway. I used to sneak up and watch from the stairs as they played *Super Mario Brothers 1*. Even if the door was closed I loved listening to the sound of the game and imagined, based on the sound, where in the game they were, lol! I remember beating the sequel, *Super Mario 2*, during my 6 year birthday party. (Dom: 1)

Likewise, there is the case of eighteen year old interviewee, James, a waiter in Mississippi, who notes that games entered his life at the age of 'five or six' (James: 1) with a pre-owned *NES* ('My family wasn't exactly rich, so we would always get the older stuff first '(James: 1)) and *Doctor Mario* (Nintendo, 1990). These were Christmas presents for him and his sister. James also adopts a paternal role for a younger member of his family, mirroring the scenarios evoked by the above comments from Alan, Andrew and Mike, only this time, the role is reversed:

> I now have a nephew who I live with, so I play [*Ocarina*] with him, watch him, just keep an eye on him in general. He's got his own file on my copy of *Ocarina of Time*. He's not even two yet. (James: 3)

The elder figures in some of the above extracts (parents of Alan and Mike, and James when playing with his young nephew) are clearly involved in a metagame of carefully judged play[145] as discussed by Juul and noted in chapter two: 'Who you play with…influences how you play' (Juul, 2010: 122). They are guiding their charges in various ways: making suggestions or taking control when on-screen actions or the controller became too difficult for a child to negotiate. The children will also, of course, have played this metagame: asking questions, making suggestions and sometimes taking (back) control. If any of the games played were multiplayer ones (it was not always noted in the above examples), then the adults undoubtedly 'self handicapped' (Juul, 2010: 126) in an attempt to provide their children with a sense of achievement and esteem. Both parent and child are locked into a feedback loop of loving interaction, facilitated by the games console. This interactive technology, then, is *uniting* these

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[145] These excerpts from the interviews - in which childhood memories are discussed - interviewees' are most likely referring to the joint play of single player games as, during this period (the 1980s and 1990s), multiplayer games were the exception, rather than the norm.

family members, satisfying their '…hunger for contact, intimacy and belongingness' (Maslow, 1954: 20) that can only be gained 'from another human being' (Maslow, 1954: 98).

For all of the interviewees, in fact, computer game technology played an important part in their younger years, uniting their families and creating environments which allowed positive, often loving, relationships to flower, something Maslow notes as essential, with people determined to gain, '…relations with people in general - for a place in a group or family' (Maslow, 1954: 20). The uniting of families through computer game play may have been encouraged by the *constant* availability of the technology. For almost all of the interviewees, game consoles and sometimes personal computers either already existed in the home (previously bought by parents or older siblings and therefore always part of the domestic setup) or were introduced by parents at an early point in the interviewees' lifetimes. In other words, it was clearly *domesticated* technology. An example of already domesticated game technology existing in the home is noted, for instance, by Daniel, another computer science undergraduate from Newcastle, hoping to eventually find work in the games industry:

> I think my dad and I think my sister sort of had a *ZX Spectrum*. Then my sister, I think, got a *Megadrive*. (Daniel: 1)

An example of the latter means of introduction is noted by Andrew:

> My first personal experience [with computer game technology] really was when my brother got to secondary school. As a reward, my parents got him a *Nintendo 64* and, er, sort of the first thing I ever properly played was [*Super*] *Mario 64* which was amazing. (Andrew: 1)

Sam an eighteen year old photography student from near Newcastle, and perhaps the most effusive of the face to face interviewees, also notes that his first encounter with computer game technology - and with the *Zelda* series itself - was with a parent, and with domesticated technology. As with Daniel and Andrew above, this interactive domesticated games technology provides a focal point for family time and closeness for Sam also. Here we also have a strong child-parent bond with the (perhaps more traditional) maternal, rather than paternal figure. This said, loving feelings towards *both* parents is revealed in Sam's use of the potentially offensive term 'fags', here rendered

affectionate by both the general tone and accompanying laughter. The retention of this now archaic technology emphasises its continuing importance in the family history; it remains a physical reminder of something that helped yoke it together:

> My mam and dad – massive Nintendo fags [laughs]. Yeah. First day the *NES* came out, they got one. We've still got it in the loft. And then we got the *SNES* and then that's when I started playing, erm like watching my mam play. Like it was in my sisters room and my sister used to go to bed really early and I used to sneak out of my, of my bedroom and sneak into my sister's room and sit and watch my mam play *Zelda: A Link to The Past* on the *SNES*. (Sam: 1)

The playing of games with his mother dominates Sam's early experience, as does the continuing sense of collusion suggested by their early 'sneaked' sessions, evident here in his account of his first encounter with *Ocarina* itself, received as a Christmas present. While Sam is clearly a little older at this point - and his maturity underlined by the sense of a changing dynamic in the maternal relationship - game technology, in particular *Ocarina,* is still being used as a means to solidify parental closeness:

> My mum was really excited about *Zelda* - about *Ocarina of Time* - as well. She was like, 'Come on, son. We'll play…we'll go upstairs and play *Ocarina of Time.*' I was like, 'Alright mum, we'll wait until after dinner okay, then we'll play.' I was being the voice of reason in…in using my Christmas present. Erm, we eventually got it out and my mum was blown away by the graphics of the *N64* because she hadn't seen anything like it before. (Sam: 3)

Michelle, a radio producer hailing from Ohio, is one of only two female interviewees and the *only* one interviewed via email. Like others, she too relates games consoles to parents and family and the closeness and warmth this brought her. In a single response, she reveals this in several different ways. She firstly links computer games to literal warmth - as an escape from a hostile external environment - and (more importantly for this chapter) more figurative warmth in the shape of familial (in particular, paternal) closeness. This theme is then continued in her allusion to game playing while visiting an uncle. Finally, and perhaps most significantly, she links two games - which are still held high in her affections (*Super Mario World* (Nintendo, 1990) and *Mario Paint* (Nintendo, 1992)) - to the dissolution of her parents' marriage and, presumably, the family home. The reason this last point is so significant is because of how it casts the computer game

(in particular, the Nintendo authored computer game[146]) in the role of comforter or metaphorical security blanket. Here, the computer game can certainly be seen as a form - or *evolved* strain - of Winnicott's transitional object (noted in chapter one) inasmuch as it has eased the dislocation of child from mother. While these objects are usually cuddly toys and the like, here, it is the computer game. In this case, of course, it is a child older than the infants discussed by Winnicott in relation to transitional objects, and it is a more literal, physical loss than that associated with the child's emerging sense of self. Significantly, though, these objects, these games, are still linked to a parent (her father) and the emergence of a *new* home:

> I think the first videogame I ever played was *Astrosmash* on the *Intellivision* in 1987. My dad owned the console and we only brought it out during the winter months, since in Northern Ohio the winters can be cold and snowy…I had experiences with the original Nintendo system when I'd go to my uncle's house, playing *Mario Bros. 1* and *Rad Racer*. I also had some friends that had Nintendo and I played the other *Mario* games. When I was nine, the Christmas after my parents divorced, my dad bought me a *Super Mario World and Mario Paint*, which I still love to this day. (Michelle: 1)

Perhaps unsurprisingly, some interviewees suggested that their parents consciously [147]attempted to utilise domesticated computer game technology for educational purposes or, to use Maslovian terms, to satisfy their children's basic cognitive needs. While this was the primary, or obvious, reason for the guiding of these interviewees towards the technology, it should also be noted that, perhaps less consciously, the underlying desire to satisfy developing cognitive needs was undoubtedly still inspired by parents' love for their children. This parental focus on learning and education was certainly the impetus

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[146] As noted briefly in chapter two, Nintendo has long been associated with childhood or, more specifically, products aimed at a young audience. This dates from before the company's entry into the computer game market. A long standing producer of Hanafuda playing cards (initially aimed at targeting Yakuza gangs), like so many Japanese companies, Nintendo restructured after WW2, borrowing cultural elements introduced by the occupying American forces, they introduced Mickey Mouse branded playing cards and children's toys. (Allison, 2006). This prime focus on a younger demographic continued throughout the 1970s and 1980s. Nintendo's first major computer game for their first home console, for instance, - *Super Mario Bros* on the *NES* - is set in a fairy tale world, with clear echoes of Disney's Magic Kingdom and their mascot Mickey Mouse (The Mushroom Kingdom and Mario, Nintendo's 'signature character' (Kline, 2003: 115)) replete with bright, primary colours. The notion of childhood in relation to the play of *Ocarina* is discussed briefly in chapter five.

[147] This is as opposed to the, perhaps more natural, use of the games console as a locus of family activity and closeness.

for Phil's introduction to computer game technology. Despite this parental desire, Phil was only interested in games, something which, as computer game scholar Graeme Kirkpatrick points out, was common at the time: 'Parents bought computers because they believed the machines had educational value but in many cases children just used them to play games' (Kirkpatrick, forthcoming, 2012). Thirty four year old Phil (who works in a publishing house in North East England), is the only interviewee to have experienced the arrival and massive uptake of home computers in early 1980s Britain. Certainly, the advertising which promoted this first wave of home computers was characterised by an emphasis on educational opportunities. As can be seen in figure 5, below, the computer is presented as a sober piece of technology, with an emphasis on learning the machine and on practical and educational applications. In this example, games are afforded only half a sentence of text in the second paragraph. [148] Such emphasis may help explain parental purchases at that time.

Figure 5: A 1982 Advertisement for Acorn's BBC Home Computer **(Electronics & Computing Monthly, December 1982)**

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[148] Source: http://www.gondolin.org.uk/hchof/hchof.php?id=15

Phil notes:

> My dad was always into computers. He was always very keen on technology so
> he, so he...introduced me and my brother to computer games quite early on. We
> got, we had an early *Atari* system first of all. Er, *800XL* I think it was called. The
> big thing at the time was the *Atari Video Game Console*…that was, like, the
> thing everyone was playing on but we had the computer because he was keen on
> like teaching us how to program and stuff like that. (Phil: 1-2)

Here we have the computer itself becoming a puzzle, with the game being to master it.
This understanding and mastery of computers brings rewards similar to those found in
the games played on them. In the words of Steven Levy in his account of computer
'hackers' - highly computer literate individuals who enjoy finding and exploiting
weaknesses in computer programs - 'Once you had control, the godlike power that
comes from programming mastery, you did not want to let go of it' (Levy, 1984: 381).
For most parents, however, this exploitation of domesticated ICT was not concerned
with the 'game' of mastering the machine, but rather with the educational games[149] that
could be played on it.[150] Lee, the youngest of the interviewees, having only recently
celebrated his eighteenth birthday, and about to begin an undergraduate course on game
design at a large university in the Midlands, outlines the results of such parental
concerns:

> The first game I ever played was probably one of those learning games you get
> on the PC when you're about five or something and it's all about letters and stuff
> and we had a really old computer and it was all sort of green and [laughs]
> moving around text based games - just letters moving around the screen and I
> sort of thought that was quite good. And then when I went to nursery, I
> remember sort of a *Noddy* game and er, it was really...just really interesting. I
> remember sort of clicking on all the things and everything happening.[151] (Lee: 1)

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[149] An interesting exception to this educational agenda is provided by Colin who notes his parents' role as
tastemakers, basing their choice of gifts on critical standing alone, seemingly devoid of any educational
agenda.

[150] It must be noted that educational provision remains a key reason cited for the purchasing of computer
technology: …while there were occasional examples of adults deciding to acquire a computer for their
own formal educational needs, more often than not this was expressed as 'needing' a computer to assist
others in the household - notably children. (Selwyn, *et al*, 2006: 106)

[151] Lee's continuing love of computer games is, like Sam, evident not only from his obvious enthusiasm,
and participation in this project, but from the presence of his *Nintendo DS* at the interview, a constant
travelling companion.

The work done by not only developmental theorists such as Donald Winnicott - on the importance of childhood play in general - and computer game scholars such as James Paul Gee and Marc Prensky [152] - on childhood computer game play in particular - give validation to the implied parental belief in stimulation and cognitive development being achieved through play. Gee, for instance, discusses cognitive development via gameplay in some depth in his book, *What Videogames Have to teach us About Learning and Literacy*. Two of his most salient observations concern how computer games allow children to 'take risks in a space where real-world consequences are lowered' (2008: 67), and his '*probe, hypothesise, reprobe, rethink*' process (2008: 90) that, he argues, lies at the heart of computer game play. The first, of course, resonates with Bettelheim's thinking noted in chapter one, the consequence free play, 'allowing [the child] to cope directly or symbolically with present concerns' (Bettelheim, 1987: 170). Gee's second observation illustrates how games stimulate and develop the thinking process:

> The player must *probe* the virtual world…based on reflection while probing and afterwards, the player must form a *hypothesis* about what something (a text, object, artifact, event or action) might mean in a usefully situated way. The player *reprobes* the world, with that hypothesis in mind seeing what effect he or she gets. The player treats this effect as feedback from the world and accepts or *rethinks* his or her original hypothesis. (Gee, 2008: 90)

This, says Gee, is the 'basis of expert practice…it is how children initially build their minds…as they develop early in life' (2008: 91). Such purchases of game technology are attempts to stimulate this developmental cognitive activity, revealing parents' love for their children.[153] Of interest to note in the above extract from Lee is his use of second person address as this betrays a belief that playing such games, on such a platform, at such an age, is the norm. That other interviewees noted similar educational games or acts of parental gifting, gives credence to such a belief. This is best illustrated in the following exchange between Lesley - 'studying natural sciences, mostly archaeology but

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[152] Among other things, Marc Prensky identifies 'five levels of learning in video games – 'how, what, why, where, when/ whether'. http://www.marcprensky.com/writing/Prensky%20-%20What%20Kids%20Learn%20Thats%20POSITIVE%20From%20Playing%20Video%20games.pdf
[153] More comment on cognitive achievement and satisfactions, especially in direct relation to *Ocarina* is discussed in detail in the following chapter (chapter five).

also anthropology and geology' (Lesley: 1) - at a North East university, and her partner Dean, 'specialising in electronic engineering' (Dean: 1), at the same institution:

> L: First computer console I owned was the *Amiga* which was my father's and we had, erm, *Lemmings* in that and that was the first proper game I played. I mean, we had kids games on that, like a frog you had to get across a Lilly pad in certain numbers...maths...fun...*Fun School*, that was it! Yeah, *Fun School*.
> L: You remember it [to Dean].
> D: I...I...I had several of them. They were like 3+math and English...educational games.
> L: And shopping lists.
> D: Yeah, shopping and getting change. (Lesley and Dean: 1)

While it might be impossible to state the long term benefits of such software, the fact that it was seemingly engaged with and is remembered implies some cognitive satisfaction - the satisfaction that derives from a basic '…desire to understand, to systemize, to organize, to analyze, to look for relations and meanings' (Maslow, 1954: 25) - was gained. It also suggests that the parental investment of money (as well as love) was not wasted, even if it were unsolicited.

The domesticated game console (or domesticated microcomputer) also encouraged closeness to siblings and other young family members as well as parents, and this is evident in Phil's comment below. The overwhelming sense here is one of comfort with a loved one in the secure bubble of home, much like the sense evoked in this chapter's opening reminiscences regarding parents:

> I've got some really good, some sort of really fond memories of that [an *Atari ST* 'Value Pack'] Like getting that pack and my parents going out on a Saturday night and me and my brother just sitting there going through all the games, constantly playing loads of stuff. (Phil: 2)

Journalism student Colin's earliest memories of playing computer games are also of shared times with his brother, his comment revealing an enjoyable six months being spent in joint exploration of both the virtual playspace and their developing abilities:

> *Super Nintendo* with *Super Mario World* – I must have been six at the time when we first got it and I was a complete novice. It was actually my brother's but we both played it. It took us six months to complete it. It was our very first videogame. That was brilliant. (Colin: 1)

Michelle's narrative also features play with a sibling, this time her sister:

> I remember countless hours playing in the dark basement rec. room, my younger sister watching. My best memory is of both of us cringing and cowering at the sight of the re-deads [monsters in *Ocarina of Time*]. She would hide under a blanket and plug her ears so she didn't have to see them and hear their deathly moaning. (Michelle: 5)

Much like Phil, Michelle also hints at a pleasure in shared private activity with a sibling, with a sense of love and 'real togetherness in the face of a common enemy, *any* enemy' (Maslow, 1954: 20) evoked by her comments.

1.2 *Security and Love: Friends*

If the 'micro-context' (Moores, 2000: 105) of immediate family understandably saturates interviewees' early experience with computer games, it does, perhaps also understandably, fade as the narratives progress. However, the presence of others and their importance remains. So does the important role of games technology in the reinforcement and lubrication of important, loving, relationships. It is also necessary to note that this wider sphere almost exclusively still involves the family home, either the homes of interviewees or those of their friends ('I played at other people's houses, (Lee: 2), 'I actually remember a friend coming over and managing to get, like, twenty power stars in one day' (Andrew: 2)) and for Michelle, a friend is responsible for introducing her to the *Zelda* series itself (one of my friends had [*The Legend of Zelda: a Link to the Past*] and she let me borrow it. The game was magical, challenging, and fun!!!'(Michelle: 1)).

Dom when discussing *Ocarina* itself is particularly explicit about the importance of sharing gameplay with his peers: 'I just played it to friends to get them to experience the story with me, since it is really so sad to be all alone with a great experience as that' (Dom: 2).While Dean certainly had early home experiences with (educational) computer games, (discussed later in the chapter) his *main* introduction to computer games was via a friend, with domesticated games technology being at the heart of the friendship:

> My parents wouldn't get me a... er... videogames console. Then eventually a friend got me one: the original *Gameboy*. I was about six. (Dean: 26)

This was the beginning of a trend for Dean, with many of his subsequent play experiences being social or associative. It is also significant, that, as with Michelle, a childhood favourite, *Snoopy's Magic Show* (Kemco, 1990)- which is very much a childlike game in terms of both visuals and level of difficulty - is still cherished to this day. As it was the first game on the console gifted by his friend, it is fair to assume the game was also from the same source. It is therefore reasonable to argue that - as for Michelle and her *Mario* games - this game has acted as an evolved transitional object, easing Dean's separation (temporary or otherwise) from this clearly special friendship and helping to retain a sense of connection:

> I played the *NES* and *SNES* at friends' houses. Erm, the first game I got for the Gameboy was *Snoopy's Magic Show*, which I still really enjoy. (Dean: 26)

As Dean grows older, the closeness with friends remains, with the games technology still acting as a social adhesive. It is also significant to note here Dean's desire to replicate the technology owned by his 'best friend' (Dean: 26) when they are apart, as if the social associations Sony's *PlayStation* bring are important to him. This line of reasoning seems especially sound when one considers that the game in question – *Final Fantasy VII* – was available on a machine Dean already owned and at a cheaper price:[154]

> My best friend, who is still my best friend...I played the whole thirty hours of *Final Fantasy VII* at his house over a summer. He was a very patient friend. Erm, and that kind of kicked me into the *PlayStation*. (Dean: 26)

Dean was interviewed with his partner, Lesley, and both speak of the level to which computer games and game culture saturate their lives. Their home is dressed in game related decor ('Our house is like a geek's paradise' Lesley: 27), they name pets after beloved characters, have pooled their games ('We've amalgamated collections now.' (Lesley: 27)), and joke about custody of them should their relationship come to an end.

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[154] It is difficult to gain precise, comparative, retail prices for any game, let alone one released so long ago, but PC versions of console games have historically, in the UK, been around £10 cheaper than their console counterparts.

For this couple, both games technology and what might be termed computer game ephemera (or, to use Consalvo's term, 'paratexts') not only lubricated their relationship, but are being purposefully used to create a psychologically secure environment. It would also be fair to state that a shared passion for games played a part in encouraging the beginning of their relationship. For these interviewees, then, computer games and computer game culture plays a significant part in making them feel secure and loved. Finally, Lesley's use of the word, 'geek' demonstrates her awareness, or perception, of how 'gamers' - and therefore her and Dean - are viewed by others, namely non-gamers or society in general. The tone suggests, however, that Lesley does not consider this perceived view as a negative, but rather the opposite, with the word, arguably, transitioning from a pejorative to a positive in recent years, reclaimed and re-appropriated by those involved in media based sub-cultures in a manner similar to how the word 'queer' was reclaimed by the gay community (Johnson and Levy, 2012: 130). Indeed, her self-esteem may actually be bolstered by viewing herself as 'geek'. This may well be because the word is positively reinforced in her relationship with Dean, who recognises and encourages the use of the word as complimentary, to be shared by them both and applied to each other affectionately. Such a form of recognition and the esteem arising from it clearly resonates with the theories of not only Maslow, but also the thoughts of philosopher Axel Honneth who sees such 'mutual recognition' (Honneth, 1996: 122) as helping form the foundation of esteem and respect - which in turn provide sustenance for human development.[155] Were gaming more respected as a pastime, rather than being seen by some as 'infantile escape' (*Edge*, #190: 59), then Lesley's sense of esteem arising from her recognition as a gaming 'geek' would be even greater.

With Phil also, games technology also continues to lubricate relationships as he ages, with the following comment on adolescent friendship sharing strong similarities

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[155] It is worth noting here, that Honneth, like Maslow, sees esteem as an important part of healthy human growth:

The experience of being socially esteemed is accompanied by a felt confidence that one's achievements or abilities will be recognized as 'valuable' by other members of society. We can meaningfully term this type of practical relation-to-self...'self-esteem', as the parallel category to the concepts of 'basic self-confidence' and 'self-respect' (Honneth, 1996 :128).

with his earlier description of time spent with his brother. His final line, especially the word 'magic', serves to underline the importance of this social rapport:

> I remember the *Super Nintendo* came out, which would have been about '94 something like that, maybe earlier and, er, one of my best friends, he got one at a similar time, so that then became a thing that we would do together, playing you know, multiplayer games around each others' house. He was also really into PC games so he'd show me a lot of stuff 'round his house. I was really into the *Super Nintendo*. It was sort of a magic time for me. (Phil: 3-4)

Sam is especially effusive in his discussions of games and friendships and the central role played by domesticated technology in lubricating and strengthening these attachments. In this case, repeated engagement with *Ocarina* allows for the feelings of solidarity and *belonging* within a group of peers, spending time with whom is something Mihaly Csikszentmihalyi - whose ideas on flow are noted in chapter two - identifies as being especially important to happiness, 'people report the most positive moods overall when they are with friends' (Csikszentmihalyi, 1992: 186). This is also clearly an example of a recognition and friendship ritual, as identified by Randall Collins which is, likewise, noted in chapter two:

> [We] just sat down and thought, 'Got nothing else to do. Let's get a crate in. Let's complete *Ocarina of Time*.' Normally it took us about…twenty-seven hours. We'd like...we'd start and then we'd like, we'd finish a bit over, but…it wouldn't matter 'cause we'd still have another crate. Or someone would carry on playing and another one would go to the shop for another crate. (Sam: 6)

Furthermore, this social interaction with a group of peers also corresponds to Maslow's thoughts on being part of a group, with him under no doubt as to its significance in a person's life, '…the deep importance of the neighbourhood of one's territory, of one's clan, of one's own 'kind', …one's gang' (Maslow, 1954: 20). We have, says Maslow, 'deep animal tendencies to herd, to join, to belong' (Maslow, 1954: 20). It is perhaps no coincidence, then, that online computer game teams often refer to themselves as clans[156] emphasising both their closed, unique identity and their being apart or different to

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[156] Considering the amount of work on online gaming, surprisingly little of it has focussed on the concept of 'clans'. Most recently, however, clans have been discussed as part of a wider discussion by T.L Taylor (2012).

others, resonating with Roger Caillois' notion of community and secrecy. The example from Daniel below also highlights the important association of friendship and gaming, with a friend playing a particularly considerate, advisory role:

> One friend in particular kept…would like come round and be happy to be like, sit and like talk about...not say directly go 'Oh you have to here and here.' but he'd be like, 'Oh I think there's a bit where you have to go in a Water Temple and it's supposed to be hard.' And, like, talk about it, like what was coming up. (Daniel: 4)

Indeed, instances of such help from friends are common in the narratives, with the most detailed examples coming from Sam:

> Well, erm, my ex-girlfriend – she got stuck on the Shadow Temple [laughs]. I was, like, 'What?' Not…erm, she got it about same time as me, maybe a couple of years later and she still hadn't completed it. She was stuck on the Shadow Temple. 'cause she got to the Shadow Temple and left it, couldn't remember where she got up to. And I was, like, 'Right, giz it here!' Played. Done. (Sam: 8)

Although there are other, less positive interpretations of such actions, and these are discussed at the chapter's end, one obvious reading of them is as acts of friendship or love by first Daniel's friend and then Sam. The same can be said of the actions outlined by James, below. James notes how, in his opinion, his gifting of *Ocarina* to a peer contributed towards the other's happiness. Such a belief may be understood as helping to satisfy both James' love *and* esteem needs:

> Back when I was in High School, there was this kid whose mother had him on so many stress and ADD [Attention Deficit Disorder] medication that it wasn't even funny. Poor kid had to take so many pills during and after classes. One day I asked him if he ever played videogames and he said he hadn't really. So, I gave him my old copy of *Ocarina of Time* and within a few weeks he had stopped taking many of his medications and seemed much more relaxed about his life. (James: 1)

James' comment suggests that Jane McGonigal's future vision of 'games that fix our treat depression…anxiety and attention deficit disorder' may already have begun (McGonigal, 2011: 14). James' thoughts, along with the most recently quoted comments

from Sam's narrative, introduce another Maslovian element being discussed here, that of self-respect or *esteem*.[157]

2: Esteem

As noted in chapter one, Maslow made a qualitative statement about esteem, noting that 'the most stable and…healthy self-esteem is based on *deserved* respect from others rather than on external fame or celebrity and unwarranted attention.' (1996: 22). This deserved respect appears in the comments below, which are typical of those given by almost all of the interviewees. In particular, this is esteem gained from 'deserved respect' from members of a shared subculture, with '…commonly shared values' (Honneth, 1996: 87). In the first extract, Kieran's respect for Sam's gaming ability is evident in his desire to co-opt his services:

> The first time we did it – me and my best mate Kieran – erm, he was like, 'Sam, where are you on *Ocarina of Time* now?' I was like, 'Oh, I've just finished The Fire Temple.' He was, like, 'Right, get up mine now. We're going to do The Water Temple. I…I…I've started it, but I can't do it. We're going to do it together'. (Sam: 14)

Sam indicates that esteem is not just achieved by a display of skill, but also by a pronouncement of them and such bragging rights[158] are also discussed by Lee, whose interview extract immediately follows Sam's below:

> You go into to school and, like, all of your friends who've played *Zelda*…sort of like, 'Yeah, I did the Water Temple. Have you done the Water Temple? Nah, I didn't think so.' [laughs] It was like bragging rights. (Sam: 15)

And:

> When you're playing games, people always try and say like, 'Oh, I'm better than you at a game.' So, sort of proving that you're good at the game and stuff– especially when you're a kid – is kind of like quite a big thing. So, sort of

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[157] The notion of esteem also hovers in the background of the following chapter (chapter five), especially in the portion which discusses achievements.

[158] Such bragging can also, of course, be interpreted negatively and this is addressed in the closing discussion of this chapter.

beating the whole game is kind of a big thing if...maybe if nobody else has done it, or you both got it at the same time and you've done it first or something, you sort of feel proud of yourself and then you can sort of go up to your mate and say like, 'Oh, I'm better than you,' and stuff. (Lee: 12)

Discussing games played right to the present day, Alan also gains esteem from the respect of others; others who are also, as he noted later in his interview, fervent game players. Alan's self-esteem here stems from his friends' disbelief at both his competence and tenacity:

I mean I have a very high threshold for...for tolerance of frustration, and all the guys that I live with completely don't understand that and see me, you know, er playing *God of War* a while ago - which is quite a difficult game - and I was playing that on the highest difficulty level. (Alan: 8)

Alan, then, is gaining esteem from two areas identified by Maslow, the first being 'the desire for strength, achievement, adequacy, mastery and competence, confidence in the face of the world' (Maslow, 1954: 21) and the second, 'the desire for reputation or prestige (defining it as respect or esteem from other people), status, fame and glory, dominance, recognition, attention, importance...or appreciation.' (1954: 21), or, to put it another way, self esteem and esteem from others. Interestingly for Sam, below, it appears that a similar sense of self esteem is gained by proxy, or at least by association, with him seeming to gain a high level of satisfaction from the achievements of friends, or one friend in particular, Kieran.[159] Kieran being mentioned by name - as he is repeatedly throughout Sam's narrative - reinforces this idea of desired close association.

My mate Kieran can do The Water Temple with his eyes closed and I've actually tested on…tested him on this and can do it. You go, 'Kieran, you're in Lake Hylia…you're in front of the entrance to the…to the, er Water Temple now. You've got the Iron Boots on. Go!' and he'll do it in about fifty minutes. He does it,…like when…when Morpha comes on and you've got to hookshot it, h…he knows exactly where the dot is and he can hear whereabouts on the screen it is from the speakers he's got. (Sam: 5)

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[159] The commonly used term for this is 'Basking in Reflected Glory' (or BIRGing), a term coined by Cialdini *et al*, 1976.

Some of these examples also challenge Mia Consalvo's concept of gaming capital discussed in chapter two. Basing her theory on Pierre Bourdieu's concepts of different types of capital (in particular, cultural capital) Consalvo understands gaming capital as an *individual* form of cultural wealth acquired through gameplay skills and knowledge, something '…the power gamers would possess and lesser players would lack. (2007: 38)'). Sam's pride in Kieran's playing, Sam's shared play with Kieran and Sam's sharing of his own ability with his ex-girlfriend, however, suggests that gaming capital is, in fact, *group* property, as much as individual property: 'power gamers' sometimes choose to share their gaming capital.

However it is distributed, the narratives ooze with instances of esteem being engendered through others via domesticated game technology. Further instances of interviewees gaining esteem, security and love through computer game technology are also found further afield.

3: Security, Love and Esteem (in the wider Social World)

The world beyond living rooms, bedrooms and other living spaces also intersects with the interviewees experiences with games. There is firstly, the Internet, though the Internet can, of course, be part of the home technology of the Personal Computer. While, as may be expected, the Internet does not feature especially heavily in interview narratives largely dedicated to (or certainly inspired by) a single player game, it is, nonetheless, still mentioned. Most commonly, interviewees discuss the discovery of online tips for play[160] but occasionally their *Zelda* related use of the Internet goes deeper. Lesley, for example, discusses what she perceives as a rich fan culture, noting not only such 'fannish' (Jenkins, 1992) practices as the creating of artwork and fiction, but also lengthy theorising (largely about Princess Zelda's sexuality) in which she participates.[161] Such participation indicates a sense of belonging, in particular to this subculture or 'virtual community' (Rheingold, 1993).

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[160] These included de-contextualised play of the ocarina discussed in the next chapter (chapter five).
[161] On this subject, Lesley notes:

As found by Howard Rheingold, who pioneered early studies on Internet communities, belonging to such is, in many ways, no different to belonging to a real world one. Certainly, work on fan communities in general (Jenkins, 1992, 1996, 2006, 2008) highlights the sense of belonging that some members experience there. This seems to be borne out in the case of Michelle, who holds an executive position at the *Zelda* fan website, *Zelda Universe*. That this position bolsters her self-esteem is evident in her suggesting that attaching her name to my interview request ('as a respected and valued ZU [*Zelda Universe*] member' –email response) would improve the chances of it being responded to. It is also evident in the proud tone apparent in her account of becoming involved in the community of *Zelda Universe*. Her words present a textbook example of Maslow's description of esteem satisfaction, the 'feelings of self-confidence, worth, strength, capability, and adequacy, of being useful and necessary in the world' (Maslow, 1954: 21):

> I jumped back into *Zelda Universe* full force, eventually becoming more and more involved in the community aspect of the forums- the chit-chat, the discussion, the making new friends. I became well known around the forums. Now I'm a moderator there. (Michelle: 4)

In addition to such explicit references to Internet communities, it must be remembered that several of the interviewees are members of *Zelda* websites and responded to advertisements placed on their forums, the implication being that for these too, *belonging* is important.

Other narratives include details of shared shopping trips to game stores; bus journeys spent discussing strategies and conspiratorial whispers in classrooms over computer game screenshots. Yet more tell tales of game parties, game dominated student life in student flat shares[162] and of late night gaming sessions with partners.

> There's a big thing if you go and look it up on the Internet that Sheikh [a helper character in *Ocarina*] is not a girl and that Link is gay which is really cool. I find that really interesting and we've sat and argued quite a lot about it. (Lesley: 23)

[162] Michelle's life in particular is saturated in such a way:

> When I was 20-22 [she is 24 now] years old, I lived with several roommates who were all avid gamers. We would spend every day doing some sort of gaming. (Michelle: 1-2)

What is most significant is the extent to which the shared or the social still has a place for these players, most commonly revolving around domesticated game technology, still continuing to satisfy one or more of the Maslovian needs of security, love and esteem discussed throughout this chapter.

Sam, for instance, regularly replicates the type of social event noted above in reference to *Ocarina*. Here, he discusses a single player game released shortly before his interview, the sense of security amongst friends, and the sense of belonging to and within such a close-knit group clear to see:

> With *Metal Gear Solid 4*, we just… [laughs] we planned it out and er, I got the beer, Hogan got the Relentless and the Pro Plus and Matthew got the food and we all met at Hogan's house and we just sat there for two and a half days. Like, we each took turns on, erm, either missions or Bosses. Like, erm, we'd do it up to a cut sce…cut scene and then we'd swap. We also played this really mint game called 'Smoke along with Snake.' Basically, whenever Snake sparks up a tab, you have to as well. We had no cigarettes left by the end of the night…by the end of the first night. And he tricked us! At one point, at the start of the game, he like, puts a tab in his mouth and, like, rolls around for a bit and just stands there with a tab in his mouth and doesn't…we thought he'd lit it and he hadn't lit it and we had to have another one. Like, 'Snake, how dare you trick us like this!?' Hideo Kojima [*Metal Gear 4*'s (Konami, 2008) director/developer] - he's a sneaky bastard. (Sam: 7)

Many of these joint activities (Saturday night play with siblings, bragging in the playground, turn-taking with friends, sneaked late night play with parents, beer fuelled marathon play sessions, group-mimicking of a game character's actions) may, of course, be viewed as ritualistic in the terms outlined by Collins and Turner, noted in chapter two. Indeed, the group-mimicking is, like Collins' comments on group cursing, '…repetitive and rhythmic; it strongly focusses attention, builds up emotional intensity, and establishes social membership boundaries.' (Collins, 2004: 206) and provides further evidence of computer games' ability to unite.

Finally, the interviewee who discusses the warm memories of computer game play in his early life, on his father's knee, and whose extract is used to open the chapter - Alan - seemingly has computer game play and the social permanently allied. His

narrative is brimful with references to family and friends and he cohabits with housemates who share his passion:

> I live in a house with, er, four other people - students same sort of age as myself. A lot of people spend a lot of time playing games in my house. (Alan: 2)

It seems that Alan is, figuratively, like most of the interviewees, still playing games on his father's knee, with the associated social closeness this suggests. It is worthwhile here, then, to remind ourselves of the arguments of the critical theorists noted in chapter two. Albert Borgmann, for instance, who along with Postman is another well known commentator on, and detractor of, modern technology, notes that technological objects '…distance us from ourselves and the world around us.'(Gasset, in Hanks 2009: 122). To put it another way, Borgmann sees technology as removing people from things that really matter, satisfying immediate and fairly base individual desires only. To remedy this, Borgmann argues for a return to what he terms 'focal activities' that bind people to each other and their environment. As illustration, he uses the metaphor of the hearth: 'The Latin word, focus, meant hearth. In a pre-technological house, the hearth constituted a center of warmth, of light and of daily practices.[ ]In ancient Greece, a baby was truly joined to the family and household when it was carried about the hearth and placed before it….the hearth sustained, ordered and centered the house and family' (Borgmann, 1987: 96). Borgmann also discusses the family meal - in opposition to fast food - as an example of focal activity which strengthened family bonds (1987: 104). As can be seen in all of the examples above, however, it is apparent that technology, rather than dividing and distancing, plays a role in binding families and friends. The technology *is* benefitting 'the masses of people' of which Postman spoke, for example. Furthermore, for the players discussed above, computer game technology is - to use Bormann's metaphor - the modern equivalent of the hearth. The hearth *now* binding families and friends together, however - the phenomena which helps them 'overcome feelings of alienation, strangeness and loneliness that have been worsened by increasing mobility…the scattering of families' (Malsow, 1954: 20) - now consists of plastic and plasma rather of fire and stone.

The binding power of this plastic and plasma is revisited below in the chapter's final section.

4: The Domesticated Computer Game and Abraham Maslow

As discussed in chapter one, Maslow outlined his theory of human needs in his first major work, *Motivation and Personality.* Maslow took what he saw as the positive aspects of the 'first' and 'second forces' of psychology and - along with others such as Karl Rogers and Rollo May - incorporated them into a new form of psychology, a form he branded 'the third force' (Maslow, 1968: 13). This third force, also known as humanistic psychology, is premised on a belief in human decency and the theory that people are motivated towards psychological well being and self improvement. Maslow's thinking is in polar opposition to what the he terms the 'first force' pioneered by Freud, which is premised on human pathology.[163]

Maslow argues that people have both basic and higher needs, arranged in order of 'pre-potency'. The basic needs include the physiological need for food, shelter and safety, although the final of these also has a psychological element. The basic psychological needs are for safety and security, love and belonging and esteem.

It became apparent during the reading of the interview transcripts that engaging both directly and indirectly with computer game technology within the home resonates strongly with Maslow's theory, particularly the portion of it concerned with *Safety and Security* and *Love and Belonging*. Maslow is in no doubt that the satisfaction of basic psychological needs is achieved in the social sphere through the interaction with others: 'Basic needs gratifications - which are necessary for growth in the individual's higher nature - must come from interpersonal relations, various subgroups and the wider society' (Maslow, in Hoffman, 1996: 84). What Maslow could not know, of course - he died long before computer games became part of what computer games journalist Steven Poole calls 'the cultural furniture' (Poole, 2000: 16) - is that games technology

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[163] See chapter two for further discussion of Maslow and 'The Third Force'.

can reinforce and lubricate these interpersonal relations. For my interviewees, this lubrication clearly began in childhood.

Though Maslow is mainly concerned with adults and how they can become happy (and eventually self-actualised), only very occasionally discussing children, he does note the importance of their security and that his theory held true for people of all ages [164]. Of course, most psychologists dedicated to developmental theory write, in varying degrees of depth, about the importance of a stable home environment and parental care in the satisfaction of these needs. Donald Winnicott, for instance, in a co-authored letter to the British Medical Institute on the effect of the removal from home for evacuated children, notes the possibility of an 'emotional blackout' (Phillips, 198: 62). Humanistic psychologists or thinkers dedicated to motivational theory since Maslow also stress its importance. Edward Deci, for example, in discussing the development of autonomy - itself a Maslovian higher value, and something Postman *et al* argue technology removes - states that 'immediately, the environment begins affecting these processes [autonomy and confidence], facilitating healthy development if it allows satisfaction of basic needs' (Deci, 1996:178). The interview extracts provided in the first part of this chapter, with their very clear illustrations of paternal intimacy and care, then, evoke strong Maslovian meanings, particularly those of safety and security. [165]

Maslow, in his typically loose style, categorises the safety and security need as the desire for, 'security, stability, dependency, protection from fear, anxiety and chaos; need for structure, order, law and limits, strength in the protector and so on' (Maslow,

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[164] Only rarely does Maslow discuss his theory of needs in relation to children; children are only mentioned fleetingly in *Motivation and Personality*, for instance. The most significant discussion of the needs of children is in a conference lecture on child development, the substance of which is collected in *Towards a Psychology of Being*, and is entitled, 'Defense and Growth'. The key reason for this dearth of discussion is, according to Maslow, because children differ from adults in their existing, or 'being', in the present, rather than in any *striving* to become. That said, their security and love needs are recognised.

[165] The importance of the safety and security need is made apparent by its positioning in Maslow's hierarchy - it follows immediately from the most potent physiological needs for food, water etc., while the need for love follows directly from this:

> The hierarchy of pre-potency is an order of urgency or demandingness. The findings are so far that the most urgent are the material needs; then come the safety-security needs; then comes belongingness; then come loving and caring, friendship and affection. (Maslow in Hoffman, 1996: 201)

1954: 18). Love, he identifies as both a basic need and a higher need, and as such, its importance is emphasised. Maslow describes the love need most concisely as 'giving and receiving affection' (1954: 20). Throughout the narratives, interviewees most often describe early computer game play within both safe (psychologically safe as well as physically), protected environments and affectionate, clearly loving relationships. This is often initially with parents, but also with siblings and friends, such as in the case of Michelle and her step-sister playing through a particularly frightening section of *Ocarina* or with Sam helping his former girlfriend complete an especially difficult section of the game[166]. For, as noted by Maslow, 'the love needs involve both giving and receiving love.' (1954: 21)[167]. As was discussed extensively in chapter two, it is the unique, intensely playful and interactive properties of the computer game - as opposed to the more passive properties of other, older domesticated technologies - which allows for such strong feelings.

The narratives also show how computer games help satisfy the need for esteem, something identified as central to human development by Maslow, who notes that, 'We have what we may call the desire for reputation or prestige, status.' (1954: 21). Esteem is created through computer games, whether it is through the completion of challenges, coming to the aid of others, through individual and group bragging rights or the acquisition of gaming capital.

While being overwhelmed with negative comments on computer games and *Zelda* from people still playing *Ocarina* today was always going to be unlikely, it is a strength of the research that, even despite this, some potential areas of concern can still be discerned from the interview narratives. There are, for example, hints at game addiction. Sam, for instance, discusses what may be seen as an unhealthy amount of time spent playing games ('I stayed up a good night and a half on it' (Sam: 14)), while Lee both explicitly notes addiction and implies it ('I was hooked to it. I had quite an

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[166] In addition to being a loving act *per se*, such help also allows Sam's former girlfriend to remain in Csikszentmihalhy's zone of 'flow' (1975; 1990). Sam is adjusting the level of challenge so it again becomes appropriate for her level of skill.

[167] There is also, of course, Sam's former girlfriend to consider here. For, while she may not be an interview subject, she - like the interviewees' parents discussed earlier - is still relevant in this study and so it must be noted that such attention by Sam may be understood as his contributing towards her 'love and belonging' needs.

early bedtime in those days, but I would sort of play it up till as late as possible' (Lee: 5)). The same interviewee also comments on the financial consequences of his love for games, specifically one particular MMORPG, Blizzard's *World of Warcraft*: 'I've decided to pay for a subscription.' (Lee: 2) and notes that he spends almost all ('90%' (Lee: 5)) of his money on games and gaming hardware.

Additionally, there is the suggestion of computer game play being used as means to exclude rather than include family members, as noted in Sam's narrative ('When my sister went to bed, me, my mam and dad used to go upstairs and play *Zelda* (Sam: 3)). Instances of familial friction are also alluded to by both Alan ('My parents started saying something they have been saying ever since, that I spend too long playing computer games.'(Alan: 1)) and Tim ('My mam never let me get my own games consoles, so I spent a lot of time playing my friend's *SNES* and my dad's *N64*'(Tim: 1)). Dean too, of course, speaks of a similar situation and this is discussed in the main body text above. There is also one instance of the desire to play a particular computer game creating less than genuine unity ('I used to like and go visit my cousin because he used to have a Sega and he used to have *Sonic* and things' (Lesley: 1)) and it is unlikely this is the only case of such cynical behaviour, and comports more readily with Consalvo's notion of gaming capital being a form of exclusive, rather than inclusive, wealth.

Likewise, more examples of activities and behaviour identified as positive can be subjected to more negative interpretations, most obviously some of those noted in the esteem section. Bragging rights, for instance, can be taken as, if not bullying exactly, then certainly mildly aggressive or anti-social behaviour, while Sam's willingness to play through a particularly difficult section of the game for his ex-girlfriend can also be interpreted less altruistically, with him doing it not for love, but as a way of demonstrating superiority.

Moreover, some interviewees note that discussion of rival game consoles (such as Sony's *PlayStation* and Nintendo's *N64*) sometimes causes friction between friends:

> They'd say, 'Oh, the...the graphics are better on *PlayStation*.' And I said, 'Well, the graphics can be better but the gameplay's got to come.' And they'd tell you, 'Well there's more games for *PlayStation*.' And I'd say, 'But they've got three bad games for every one good game of Nintendo's'. (Lee: 15)

Computer games may also be seen to inspire peer-pressure related behaviour. If reported accurately, Kieran's (Sam's friend) comment relating to the completion of *Ocarina's* Water Temple ('I'll come down yours') is presented as a statement or an imperative rather than as a suggestion or question.

There are also several isolated instances noted by individual interviewees: of feigning illness to avoid school and buy more playing time ('I'd pretend to be sick so I could sit in all day and play *Super Mario World*'(Sam: 1)); implied resentment at having to share a console with a sibling ('That was my brother's console so I *had* to share it with him' (Colin: 1)) and of irritation at parental interference ('I was like, 'I've already tried that- go away!' (Lesley: 4)).

However, such negatives are few and far between amidst data that is overwhelmingly positive. Even some of these few negatives can be viewed in an affirmative light. Sam, for instance, may exclude a family member but, as noted earlier in the discussion, this also allows him some exclusive time with his mother, with all of the emotional and psychological enrichment this may bring. Moreover, the exclusion is not mean spirited or actively sought, as his sister is already somewhere else and, presumably, knows nothing of it. In a similar vein, the disapproval and blacklisting of computer games from one parent perhaps encourages Tim to spend time with both another parent and a friend and, as seen earlier in the discussion, this certainly leads to a similar situation for Dean. Such behaviour reinforces a wider significance and a central truth about social relationships: the creation of any close interpersonal bond, inevitably leads to the exclusion of others.

Conclusion

The above discussion has drawn attention to the prosocial effects and social psychological benefits that the interviewees involved in this study gained from playing computer games. In particular it shows the importance to the interviewees of the social world that surrounds the playing of games and suggests that games provide a focus for social interaction. That such positive feelings are engendered by computer game play

and its surrounding social world is in opposition to the argument that technology is atomising and socially destructive, an argument prevalent in critical theory, particularly in the work of more conservative, but influential thinkers - discussed here and in chapter two - such as Neil Postman and Albert Borgmann. The former argues that technology can never benefit the masses (it is, instead, their dangerous enemy), while the latter uses the metaphor of the hearth to argue that the socially unifying point of the home - namely, the hearth - has been destroyed by aspects of modern life of which media technology is a part.

These thinkers are guilty of not only overstating the negative, but also of basing their conclusions on empirically untested theory. Here, I have referred not only to other empirically grounded, ethnographic studies of media technology in the home, but, crucially, my own findings to refute them. Importantly, I have suggested that computer game technology is an evolved form of domesticated media (as discussed in chapter two), and that the interactive properties at its core allow for communication and participation between its users. The players I interviewed experienced the '…feeling of being 'apart-together' in an exceptional situation, of sharing something important' (Huizinga, 1955: 12), and in this sharing, some basic Maslovian needs have been satisfied.

In the first part of the chapter, I noted that the interviewees first encountered computer game technology in the family home and that this technology was introduced by parents and older siblings and through use 'integrated into [its] structures, daily routines and values' (Berker *et al*, 2006: 2). I established that computer games were played at a very young age by my interviewees and that parents (or figures in a parental role) were often there too, comforting, guiding and playing alongside them, no doubt mindful of the question posed by Jesper Juul, and noted in chapter two: '…will a child cry if he or she plays badly and loses?' (Juul, 2010: 122). The games console acted as an anchor for shared family time and a lubricant for social interactions, replacing older, much less interactive technologies which 'have all lost their magic and just become part of the routine' (Berker *et al*, 2006: 3). Games technology - often in the form of a personal computer - was sometimes purchased with the loving parental intention of education, and I turn to the work of John Paul Gee and Bruno Bettelheim to illustrate

how play with computer games has a clear cognitive value, helping children, 'develop early in life' (Gee, 2008: 91) and reassuring them that even the biggest of problems, the most 'overwhelming odds' (Bettelheim, 1976: 8) can be beaten.

I have also argued how domesticated computer game technology strengthens relations between family members in addition to those of parent and child. I have pointed to times with uncles, nephews and siblings: brothers who binge gamed, others who played *Mario* for months at a time and sisters who battled monsters in the dark. I have also found that a sense of security and love is created through computer game play with friends. There is Dean, who recalls happy memories of an RPG filled summer made possible though his friend, his *best friend* who retains that title to this day, while it is friendship which made *Ocarina*'s temples passable for Daniel, Sam and his girlfriend. Sam has friends who come in crowds, sharing beer, games and cigarettes long into the night, while Lindsey and Dean share not only their games, but also their home and their lives; perhaps the most vivid illustration here of social bonding around domesticated computer game technology.

I have also contended that the computer game engenders esteem. It derives from an awareness of individual gaming prowess - as well as the displaying and discussing of it - and by proxy, from the game playing brilliance of others. I have noted that this last type challenges the argument of computer game scholar Mia Consalvo, which states that gaming capital is an *individual* form of cultural wealth.

Indeed, the interview narratives demonstrate how domesticated computer game technology has not destroyed relationships, but often actually helped form them, develop them and lubricate them. Computer games have also helped the interviewees feel valued. Domesticated computer game technology has, in fact, in Maslow's terms, helped my interviewees to feel secure, loved and valued. The following chapter will show how the computer game is also capable of satisfying the human need for beauty, cognitive challenge and completion.

Chapter Five

Higher Needs and *Ocarina of Time*

Introduction

This chapter will discuss *Ocarina* as experienced by the interviewees and note how interaction with *Ocarina*'s four key aesthetic properties - Spectacle, Narrative, Form and Varieties of Play - offers the possibility of Maslowian fulfilment. I open with a discussion of the various kinds of significance which can be gleaned from interviewees' responses to *Ocarina*'s visual environments, or spectacle, from their appreciation of its beauty for its own reward, to their responding to it as a representation of morality. I will then illustrate how the properties of *Ocarina*'s narrative build on this, demanding the active involvement of players as moral agents. Next I discuss the role of form and completion for the interviewees and how the game facilitates the satisfaction of this need through its messy narrative, its formal puzzles and collectible artefacts. Finally, I turn to how this highly *gamic* game demands to be played and illustrate how this satisfies the interviewees' desire for creativity and self-expression before summarising my findings in Maslovian terms.

1: Spectacle

The playspace of all games in the *Zelda* series is largely comprised of natural, rural environments: a small number of towns and villages are scattered across an expanse of green fields, sandy beaches and mountain ranges. In the jargon of the series, this is The Overworld and is comprised of several large areas. In *Ocarina of Time*, these are Hyrule Field, Gerudo Valley (and Desert), Death Mountain, Lake Hyrule and Kakariko Forest. It is, largely, these areas of the virtual playspace that are referred to by the interviewees when they discuss the game's spectacle.

The interviewees find beauty in the game's simulated natural world, as exemplified by the following two comments from Phil. The first comment relates to the

world generally, while the second refers specifically to the Fishing Pond annexed to Lake Hylia:

> I do stupid things, like...wander round in the fields and like, I dunno, just sit there and look up at the sky - you know as it goes from day to night. With the new *Zelda* games anyway, certainly since *Ocarina of Time* - the way they've created this world. I like taking in the views and the atmosphere. (Phil: 6)

Interestingly, Phil distinguishes between the earlier and later *Zelda* games or, more specifically, between the two and three dimensional entries in the series. This implies that, for him, the two dimensional environments of the early games lack the inviting properties of the later, three dimensional, ones, which began with *Ocarina*.[168] His comments (I wander around...I like taking in the views'), with their complete lack of any distancing language, suggest there is no skin between himself and Hyrule and this digital landscape is, for Phil, as authentic as natural beauty. In other words, Phil would not 'like to be' experiencing the visual pleasures noted, he *is* experiencing them. This absorption in the gameworld, and Maslovian sense of 'effortlessness' (Maslow, 1962: 93) with which he becomes absorbed, comports with the concept of immersion (or Bolter and Grusin's 'transparent, perceptual immediacy' (2000: 23)), introduced in chapter two[169]:

> That had a really nice atmosphere. Like in the morning you would sort of – I don't think they had mist on it, but you kind of imagine there's mist on it. And when the sun's setting and you're just standing there fishing...you, erm, you just sit there for ages. There's very little actual achievement in terms of game progress, but it's just a nice peaceful thing to do. You just sit there and you can hear the water rippling and it just looks really nice. (Phil: 16)

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[168] This also suggests that the creation of such visually pleasing worlds is only possible in three dimensional games generally.
[169] The theory of immersion runs through this chapter and is discussed in more detail in the 'Narrative' section.

Figure 6: *Hyrule Fishing Pond*. **Some areas of the game are accessed by some interviewees for their tranquility alone. Image Copyright Nintendo**

As with Phil's first comment, the language of distancing is not present in this second extract, again suggesting that the environment of the fishing lake is as much part of Phil's environment as his actual physical one. Importantly, the actions that Phil does perform are termed 'nice and peaceful'.[170] Other respondents use synonyms for 'peaceful' or note emotions associated with this, when discussing sections of environment. James, for instance, finds Gerudo Desert 'calming' (James: 1), while Michelle feels that The Sacred Forest Meadow is both 'enchanted' and 'serene' (Michelle: 7). Also in the above comment, Phil subconsciously fills in the missing details of what he believes will make the environment even more pleasing. The content of Phil's comment is mirrored in Colin's below, both in the portion of the game discussed and that which is said of it:

> I like the lake - probably because of the fishing game. I spent ages in there, just so relaxing really - a bit like *Animal Crossing*, if you've ever played that. You spend hours just fishing...you can on *Zelda*. Er, that's one of the reasons why I like it. Just how great it looks. (Colin: 8)

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[170] This, again, resonates with Huizinga's notion of the 'magic circle' discussed in chapters two and three.

The final comment to be presented regarding Lake Hylia hails from Lee's narrative and is a short, simple declaration of admiration, which resonates with Maslow's comment on appreciation of beauty which, '…asks for nothing and gets nothing. It is purposeless and useless. Awed perceivers do little or nothing to the experience, rather it does something to them', letting it '…come in and achieve its effects'[171] (Maslow, 1954: 155). Indeed, Lee's comment, like all of the comments so far, notes an appreciation of the game's visual beauty, completely divorced from ludic considerations:

> I really like the great lake -Lake Hyrule. It's really nice. (Lee: 9)

Daniel's comment below also bears an extremely close resemblance to the first of Phil's, and Lee's and is again interesting in its observation of simple pleasures: appreciating beauty divorced from gameplay itself. Appreciation of environmental beauty is certainly important to Daniel, evidenced by both his patience and the clear pleasure he takes in beholding it when it finally arrives:

> I was sad enough to some...sometimes wait for the sun to go down, like over the hills and stuff and think, 'oh, that looks quite nice. (Daniel: 12)

Maslow was in no doubt that such appreciation was necessary for happiness, noting the following in revised editions[172] of *Motivation and Personality*:

> Attempts to study this phenomenon on a clinical-personological basis with selected individuals have at least shown that in some individuals there is a truly basic aesthetic need. They get sick (in special ways) from ugliness, and are cured by beautiful surroundings; they crave actively and their cravings can be satisfied only by beauty. (Maslow, 1954: 25)

The impact of this digital beauty is exemplified by Daniel's comment above and also in Dom's comment regarding Hyrule's setting sun: 'Suddenly the heaven started to get all red and beautiful' (Dom: 1), his enthusiasm mirroring Maslow's thoughts of the 'eager passivity' (Maslow: 1954: 155) of purposeless appreciation, or 'awed, unprojecting

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[171] Maslow's comment, of course echoes Immanuel Kant's comments on disinterestedness noted in chapter two.
[172] There have been two major revisions of the book: one in 1970, overseen by Maslow himself and one in 1987 by his editors. The first revision (the second edition) is most significant, as it is here that Maslow himself revises and clarifies his theory of self-actualisation.

appreciation of the slowly changing sunset' (1954: 155). Indeed, in Maslovian terms, these interviewees are in the 'being realm', taking the time to enjoy the lakes, hills and sunsets of the virtual playspace, comparable to his examples of inspecting 'flowers, or blades of grass, grains of sand, or the earth' (1996: 76).

The idea of visual spectacle being its own reward has also been considered within Computer Game Studies itself. Computer game scholar Sacha A Howell, for instance, argues that players look forward to the visual pleasures of the cut scene as a reward for successfully competing 'particularly difficult obstacles' in a game (Howell in King and Kryzwinka, eds, 2002: 113). Meanwhile, other thinkers in the field, King and Krzywinska, consider the visual pleasures of entire works, arguing that 'striking imagery and sound are important sources of pleasure in videogames' (2006: 124).

The simulated beauty[173] and brightness of *Ocarina* also correlates with Kantian notions of beauty being related to morality. It resonates particularly with the Kantian belief that morality has a parallel with the beautiful in nature. In the words of Kantian scholar Christian Wenzel:

> The fact that nature has produced a vast multitude of objects that we find beautiful, as if they were made for us, makes us think that we somehow *fit* into nature…Kant suggests that this makes us think that ideas and higher purposes of our inner nature like freedom and morality, may be realised in outer nature… (Wenzel, 2005: 115)

In other words, the most beautiful aspects of the natural world are a reflection of the best of our selves. The beauty of *Ocarina* can therefore be seen as an embodiment of Maslow's self actualisation, or as Maslow puts it '...the development of the fullest height that the human species can stand up to or that the particular individual can come to' (1971: 165).

A somewhat inverted idea to the one expressed above - but still nonetheless in a similar vein - is the notion expressed by another eighteenth century philosopher, Friedrich Schiller. Inspired by the horrors of the French Revolution, Schiller notes that exposure to beauty is key to improving man's moral character. The beautiful, he says,

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[173] With the production team using European reference material, it is perhaps a particularly Westernised strand of beauty. (http://www.miyamotoshrine.com/theman/interviews/08982.shtml)

can unite the seemingly disparate qualities of sensuousness and reason, stating that, '…it is through beauty that we can arrive at freedom' (2004: 27). The freedom of which Schiller speaks can easily be read as the freedom to self-actualise.

Ocarina's use of the environment to represent 'good' is perhaps most clearly brought into sharp relief through a key development in the narrative. When Link accidentally gifts Ganon a portion of the Triforce, the virtual playspace changes. Some areas become perpetual night (Hyrule Castle Town), others freeze (Zora's domain) while yet more - most notably, Kokiri forest and Death Mountain - become physically dan*gerous*, with deadly creatures and plants replacing friendly characters and benign fauna. Princess Zelda's picture-book fairy tale castle also disappears, to be replaced by a tall dark tower inhabited by the story's villain, Ganon. Finally, there is the weather. This once temperate climate now becomes prone to heavy rain and thunderstorms. Appropriately, Ganon's castle gets a microclimate all of its own, with its turrets endlessly circled by black thunderclouds. In addition to these rather abstract notions of good and evil, it is also clear that such changes in the environment are linked to more concrete, clearly suggested or visibly negative effects on Hyrule's inhabitants: the people of Castle Town become zombies, the fish people of Zora's Domain lose their natural habitat to ice and Kokiri forest is a clear danger to the children that live there.[174]

Figure 7: *Hyrule Castle Town.* **Good and evil are represented by environmental changes in the virtual playspace. Image Copyright Nintendo**

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[174] While not the place for an exhaustive discussion of the topic, it is worth noting that *Ocarina* also uses its characters to clearly signpost good and evil. Perhaps the most exhaustive work on computer game character design and social psychology is that by Katherine Isbister (2006). Her *Better Game Characters by Design* discusses all aspects of computer game characters and, most importantly in terms of this chapter, it discusses the basic psychological principles behind the design of 'good' and 'bad' characters. These design principles (size of eyes, facial expression, colour of clothing) all apply to *Ocarina's* characters. Interestingly, Isbister refers to Maslow's hierarchy - and in particular the safety need, and how 'safe' characters are designed - in her discussions.

No interviewees who refer to this changed environment identify the change as being pleasing to them, and some explicitly state their dislike of it, as exemplified by Lesley's comment below:

> You desperately wanted to save Hyrule and get back to what it was when you first started playing it. It was just really sad and then there was all the ice, all the water that was all frozen over in the Zora kingdom. It was all very dark. It went of kind from a kind of very happy sort of childhood to a particularly dark sort of game. (Lesley: 12)

Interviewees desire to save Hyrule, of course comport with Maslow's belief that mankind is more often than not driven to do good, with psychologists studying and basing their finding on the minority of those who are not, 'selling human nature short' (Malsow, in Goble, 1970: 25). The notion of morality, especially of moral rightness being at the core of *Ocarina* is also raised repeatedly by the interviewees and so the theme appears again in the section below.

2: Narrative

Almost all of the games in the *Zelda* series have narratives which mirror those of folk - or fairy - tales. Indeed, in *Edge* magazine's review of *The Legend of Zelda: The Minish Cap* (Nintendo, 2004), it refers to the *Zelda* series as '...sprawling, bewitching, clockwork fairytales' (Edge #144: 91). In a typical folk or fairy tale narrative, the protagonist must leave his childhood home in order to save the world. In doing so, he encounters numerous difficulties but ultimately returns home triumphant. This structure has been identified and discussed by theorists from different disciplines, but perhaps the best known are formalists Vladimir Propp (in particular, his *A Morphology of Folk Tales* (1968) and *Theory and History of Folklore* (1984)) and Joseph Campbell in *Hero With a Thousand Faces*(1984).[175] Propp also identifies works perhaps not usually associated with folk tales as having this structure. These works include the epic poems, *Beowulf* (1984: lxxii), *The Ilyad* and *The Odyssey* (1984: 114).

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[175] The latter text was explicitly mentioned by both Phil and Andrew.

This folk tale template is apparent in the very first instalment of *Zelda.* Here, a wandering Link is charged by Princess Zelda's nursemaid with a world saving task, namely to seek out scattered pieces of a magical object called the Triforce. By doing so, Link will be able to defeat the threat to the world of Hyrule, a monster called Ganon. *Ocarina's* narrative is virtually identical, only the quest is delivered via a sentient anthropomorphised plant (The Deku Tree) rather than a nursemaid.

Figure 8: *Ocarina*'s **initial exposition - and narrative impetus - is delivered by the** Deku Tree**. Image Copyright Nintendo**

Almost all interviewees state outright that *Ocarina*'s story has major appeal: 'The story is great, definitely one of the main reasons the game is as great as it is' (James: 4); 'Me and my best friend think that *Ocarina of Time* is the best game because the story is so involving' (Lee: 15); 'I think the story is the main importance to a game. *The Legend of Zelda* is no exception' (Dom: 4); 'The story's always really important' (Andrew: 3); 'The story of *OoT* is fantastic, amazing, engrossing. I can't come up with possible words' (Michelle: 8). Their satisfactions derive from the type of story *Ocarina* presents, the folk tale, and from *participating* in it.[176]

As might be expected, then, the interviewees show great familiarity with the overarching story of the series as a whole, something made apparent in this comment from Sam:

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[176] Further aesthetic properties were identified, but on further reflection, two of these seemed almost tangential in this category. 'Identifying and correcting inconsistencies' and 'a desire for justice' have, therefore, been subsumed and given consideration under 'Form and Completion'. It is important, however, to acknowledge these areas as also relating to interviewees' love of story, hence this footnote.

> *Zelda* has a basic storyline of: Link is the hero, [Princess] *Zelda* is the damsel in distress, Ganondorf or someone… [laughs] mainly Ganondorf is doing something bad with the Triforce. We've got to stop him (Sam: 18).

Essentially, interviewees want this broadly similar storyline in every instalment and Sam, again, was very clear about this:

> When I play a *Zelda* game I expect a certain storyline with some twists. (Sam: 18)

Sam, along with all of the other interviewees is enjoying the simplicity of this story, and its 'totality' (Maslow: 1970: 127). While the interviewees continue to replay *Ocarina* in adult life, it is worth noting that all, bar one[177], discovered the game when they were either a young child or young teenager. This suggests that the courageous struggle '…against overwhelming odds' (Bettelheim, 1976: 8) as children, brought child players a Maslovian sense of mastery and victory and that this sense remains as adults. The clear feeling of justice felt by children and mirrored in fairy tales as noted by Favat (1977), Ford and Pearce (2008) and discussed in chapter one, may also partly account for *Ocarina*'s appeal to my interviewees when they were children.

Indeed, it is not unreasonable to suggest that the story retains an attraction to the interviewees as young adults - meriting repeated returns to it - for such reasons. Certainly many of the interviewees, either explicitly or implicitly, demonstrate awareness of the folk/fairy tale, or mythological aspect of *Ocarina's* story, and a pleasure taken in it:

> I liked the idea of the destiny aspect. And that's what I like about all the *Zelda* games, all the ones that draw on that properly. There's a...they have this idea that the story's been played out before and it'll be played out again, just like a person that's acting out a role. And it's a very...I think it's a very interesting device. A bit like kind of Greek mythology, like *The Hero with a Thousand Faces* (Phil: 8-9).

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[177] The exception here is Phil, who was twenty three years old when he first played the game.

This is the first of two occasions that Phil compares *Ocarina's* story to stories of myth and his reference to American formalist Joseph Campbell's work shows an educated awareness of myth narrative's formal structure.[178] More importantly, however, after providing this initial overview of the series' narrative, Phil hones in on the particular detail he finds pleasing:

> For some reason I've got that fixed in my memory – playing that and like going through the whole first bit when he comes out of his house in the little village. I think I got quite a far way through on that beginning part, to the point where he leaves the forest. And there's that really sad scene where he says goodbye to his little childhood friend to go off on his adventure and that really got to me and I thought it was just...I don't think I'd ever had storytelling in a videogame like that till then that'd really got to me. And I knew then that it was, like, really special and I really loved the story of that one. Completely. And again, it had the elements of destiny and the story having been played out before. (Phil: 10)

The fact that Phil notes that the story's permanence in his memory evidences it having significance to him, but what is particularly interesting is which portion of the story this is: from its beginning to Link's leaving home. In formal terms Phil has identified the first part of myth narrative's formal structure as noted by Campbell:

> …the adventure of the hero normally follows a pattern…a separation from the world, a penetration to some source of power and a life enhancing return. (Campbell, 1949: 30)

Phil's final line reinforces his familiarity with folk-tale, or myth narrative and *Zelda's* affiliation to them, a familiarity reinforced by his reference, later in his interview, to similar elements in a subsequent *Zelda* game, *The Wind Waker*. Such familiarity with folk-tales and myth allows for the theory that Phil - perhaps subconsciously- seeks out each instalment of *Zelda,* in order to safely struggle against odds 'to emerge victorious' (Bettelheim, 1976: 8), in keeping with Bettelheim's theory.

This may also be the case for Lee, who comments on the mythological or folk tale tropes in *Zelda,* albeit less overtly:

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[178] Perhaps the most well known modern pop-culture artefact directly influenced by Campbell's work is the *Star Wars* film series, a point made by its creator, George Lucas: 'I wrote many drafts of this work and then I stumbled across *The Hero with a Thousand Faces*. It was the first time that I really began to focus. Once I read that book I said to myself, 'this is what I've been doing'' (in Campbell *et al* 1990: 186).

> There's the story - it's just sort of really engrossing I like the way that lots of the *Zelda* games are sort of related to each other, like some set in the past of the other one and future and sometimes they say like, 'Oh, the green clad Hero of Time, ' like 'you look a bit like him.' Or something and you're like, 'Ah, that's him.' I was him. [laughs] that's really good. (Lee: 4)

The in-game quotations Lee chooses to provide certainly contain the indistinct language of myth, indicating again that not only is myth inherent in the *Zelda* series and but also that he takes pleasure from this. The obvious enjoyment Lee gains from seeing himself as the 'Hero of Time' suggests that the folk tale of *Ocarina* not only appeals in (and of) itself, but that it appeals particularly because Lee is, in a sense, *part* of it, much more so than if he was experiencing it second hand in the manner traditional fairy tales are consumed**.** Indeed**,** computer game scholar, Barry Atkins - who has produced perhaps the most concentrated analyses of game narrative to date - concluded that the type of narrative present in the computer game is unique:

> The stories we read in computer games are not just pale reflections of novels, plays, films, or television programmes, but they have a different relationship with both other textual forms and the 'real world' that it …claims to represent…telling of stories in computer games works with different conventions… (Atkins, 2003: 6-7)

The uniqueness in game narratives is not derived from particularly complex forms, or originality of plot, but rather *interactivity*, something noted not only by Atkins but also by other computer game scholars, most concisely by Mark Wolf:

> The video game's simple narratives…involve the audience in a uniquely direct manner, making the viewer into a participant… (Wolf, 2001: 93)

It is this participation, or interactivity, or 'non-trivial effort'[179] (Aarseth, 1997: 1), which intensifies narrative properties and brings the player of the computer game closer to the

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[179] It is worth noting here that while interactive and 'non-trivial effort' are being used interchangeably, Aarseth himself –who coined the latter term -, rejects the former, making the use of them as synonyms perhaps seem a little strange. However, Aarseth's rejection of the term stems from its use in discussing hypertexts (or, to use his own term 'ergodic literature') rather than from its application to the more typical computer game discussed throughout this thesis ('Interactive came to signify a modern, radically improved technology, usually in relation to an older one. This industrial rhetoric produced concepts such

fictional world than that of a traditional reader or audience member to a traditionally transmitted folk-tale. It is this 'non-trivial effort' that allows Lee, for instance, to see himself as the 'Hero of Time'. Lee, along with Phil and the rest of the interviewees, can in fact be said to be *immersed* when playing *Ocarina*. As with the subjects of Victor Nell's book ('Lost in a Book', 1988) noted in chapter two, these players are *lost in a game* of *Ocarina*. Indeed, as both Lee and James note, very little disturbs their absorption:

> Nothing can stop me! (Lee: 7)

And:

> There's not much to break me in that average two hours of gameplay. I don't eat, and unless it's an emergency I probably won't get off the couch/ bed/chair to do anything. (James: 5)

Janet Murray, one of the first thinkers to apply the concept of immersion to the electronic arts, noted that the player entering a convincing gameworld, or playspace, such as the one offered in *Ocarina,* initially experiences this feeling of immersion, or '…the sense of being transported to an elaborately simulated place' ((Murray, 1997: 98). Murray continues to say that the sense is maintained and deepened by the player's actions in that world, which she terms 'agency' (1997: 128). Murray argues that the more the player sees as a result of his actions – the manipulation of in-game objects - the more his feeling of agency increases. The greater the feeling of agency, the greater the sense of immersion and the sense, therefore, that the gameworld is almost real: 'Our successful engagement with these enticing objects makes for a little feedback loop that urges us on to more engagement, which leads to more belief' (1997: 112) and this can be likened to the content of Sam's account of *Ocarina*'s quests:

> The best part of the game is the build up to going to the temples. It's… I dunno, fetching all the Cuckoos back to the woman in, erm Kokiriko village and getting the blue Cuckoo and then taking it to the guy who's upset because he's lost his blue cuckoo and then… [laughs] doing all this…and waking people up and

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as interactive newspapers, interactive video, interactive television, even interactive houses' (1997:48)). Therefore, while this – and the argument's possible relevance to the more typical computer game is acknowledged - it is still felt to be useful and valid to here use the terms synonymously.

getting Epona and…it's just…it's the entire experience…It gradually develops into something really special.. I mean…I'm very much a role playing game person. I'm not really a shoot-em-up sort of person. I prefer to sit down and lose myself in the game and get to know the characters in it…and feel as if they're my friends and I know them. It's what I look for in a game. Er, that's the same state as what hypnotists put you in for hypnosis. (Sam: 11)

These comments from Lee, James and Sam resonate with not only Csikszentmihalyi's concept of flow ('nothing else seems to matter' (Csikszentmihalyi: 2002: 4)) and the immersion theorists noted above and in chapter two, but also those of computer game designers Staffan Björk, and Jussi Holopainen, who, in their book on game patterns, discuss four types of immersion which '…can be satisfying to the players' (2005: 206): emotional, cognitive, sensory motoric and spatial. All of these are derived from a high frequency of player actions performed in rich virtual playspaces. It is this sense of immersion or, to borrow Sam' swords, 'hypnotised' state, which allows play with *Ocarina* to have the meaning that it has for the interviewees, not just regarding story, but in all of the areas identified in this chapter (areas which, in some way of course, *all* relate to the game's story). The computer game's unique interactive properties allows the interviewees to experience the game's beauty as *real* beauty, to *actually* participate in a quest to save the world and be involved in 'a cause outside of their own skin' (Maslow, 1970: 42). Indeed, participation in this cause provides the interviewees with a real sense of moral purpose. Most of the interviewees empathise with the need to save Hyrule and, Link's quest effectively becomes their own, something clearly expressed in the following excerpts from Andrew and Daniel's narratives:

> *Ocarina of Time* was the first time in a game I witnessed a real believable world, with like, you've absolutely got an incentive to save this world other than the fact that it's just the objective of the game. (Andrew: 2)

And

> You're not just playing Link to…it's not like you're playing to save the...save Hyrule for the crack…you're saving it because you…you're, like, outraged about what's happened. (Daniel: 14)

Daniel is suggesting that *Ocarina's* story is powerful enough to engender strong emotions and galvanise him into taking action, implying a quite profound level of involvement. Also of significance is the statement's suggestion of morality: Daniel is

indicating that there is a morality both of the fictional world and player and, furthermore, they are in tune with one other. Daniel discusses this morality in greater detail below:

> *The Legend of Zelda*- and any major Nintendo game – provides, however simplistically, a moral compass for a gamer. The underlying morals within *Zelda* are definitely pointing towards 'good' rather than 'evil'. Never in a Nintendo game does a bad guy ever win. I personally feel that playing *The Legend of Zelda* has had a beneficial effect on my personal development. (Daniel: 16)

A similar point – about morality – was made by Lesley, albeit more implicitly:

> That was the thing that was so...that was incredibly sad when you became adult Link. It was like, 'Yay!' but then you desperately, desperately wanted to save Hyrule and get back to what it was when you first started playing it. (Lesley 12)[180]

Here, Lesley is referring to the turning point in the narrative where Link fails to save Hyrule and sleeps for seven years. He is woken up by the 'sages' who task him with trying to save the world again, now that he is older and stronger: an adult, in fact. Most areas of the landscape are different after this seven year gap, and, as noted in the Spectacle section, these changes are mostly conveyed via weather and time effects - perpetual rain and, in some areas, perpetual darkness. There is also an increase in the amount, and capability, of roaming monsters. Here, as for Daniel, then, the story becomes the driving force behind Lesley's play. That this is linked to morality is also the case: Lesley doesn't like Ganon's dark, chaotic Hyrule. Her declaration of wanting to 'get back to what it was when you first started playing' (Lesley: 12) is, like Daniel's outrage, a desire to return to the morally sound Hyrule which existed before this plot twist.

Alan generalises a little from the specifics of *Ocarina* before covering the same ground as those interviewees quoted above:

> I think it's very important to, er, to present a realistic kind of threat to the world the game...the player lives in, to make sure he has that attachment and that kind

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[180] This comment from Lesley is also quoted in the earlier, Spectacle, section, but this repetition seems necessary.

of feeling of 'I've got to make sure that I win this. When you come out of that temple and you see what's happened to the world and this is the result of Ganon's rule. And that this is how bad the world's become. At that point you really realise that, you know, you've got to stop him and you...and it sort of became a lot more real and more important. (Alan: 13)

Interviewees have several ways of interacting and resolving tensions in this 'real and important' world and these are discussed below.

3: Form and Completion

By far the most discussed theme is that of struggle for completeness. This struggle manifests itself in a diversity of ways: in the desire to solve the game's numerous puzzles or inherent [181]cognitive challenges, in the craving to collect the game's abundant items and in the need to create narrative unity. These various strands are discussed under the overarching aesthetic of Form and Completion, below. [182]

3.1 *Form and Completion: Puzzle Solving*

The puzzles of *Ocarina* are more often than not found in the temples, commonly referred to as 'dungeons' throughout the *Zelda* series. Most of the interviewee observations in this area, therefore, focus on challenges faced in these temples and it was here that the cognitive playthrough, discussed in chapter three was most useful in understanding the processes of engagement experienced by, and sometimes alluded to,

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[181] The word, 'inherent' is here used to distinguish inbuilt or designed challenges from self imposed ones such as attempting to complete the game in record time or repairing the narrative, discussed in this category's final section.

[182] Considering its importance in aesthetics (as well as literary theory and the arts generally), 'form' is a curiously underused term in Computer Game Studies. In fact, computer game scholar, David Myers is one of the only thinkers in the field to explicitly discuss form at any length. In his chapter, 'The Video Game Aesthetic: Play as Form' (in the *The Video Game Theory Reader Two,* (Bernard P., Colin, J. P, Wolf, M. (eds.) 2008)), Myers identifies three elements of form in computer games: physical form, semiotic form and social form (2008: 15-16). While the first of these- '…encompassing the sensory relationship between player and game' - in essence is the most relevant, it is still not too helpful for this study, concerning itself with the nuances of visual language and interaction. It is worth noting here, however, that Myers coins the phrase, 'anti-form' which is somewhat analogous to Juul's notion of 'half real'. 'Anti-form', says Myers, 'is like when we ride a stick horse, it is something else, something like a horse – something like a horse but not a horse, something else: an anti-horse, which requires but does not fulfil its reference to a horse. Likewise, during play we might pretend a box is a house, or stacked wooden cylinders are a king, or a finger is a gun' (2008: 47).

by the interviewees. As will be seen below, the interviewees discuss puzzles in the temples as both individual entities or as components of larger mysteries, that some identify as the temples themselves. In addition to puzzles and thought junctions[183], interviewees also speak of general path-finding, consciousness of the overall game objective, the dungeon objective, their general status[184] and the acquisition of optional items such as Skulltulas.[185] This is the 'busyness' noted in chapter three's findings from the cognitive playthrough and it often consumed interviewees intellectually, with them reaching Loftus and Loftus' 'optimal level of informational complexity' (1983: 42). Such intellectual consumption, or absorption is supported by the concept of working memory, the name given to the theory of the number of elements a person can retain awareness of at any one time. When research started on this subject in the 1950s, the number of elements was thought to be seven. More recent research, however, suggests it is as low as four.[186] Such a notion of mental busyness within the virtual *playspace*, of course, is central to the concept of immersion introduced above.

It is strikingly apparent that the interviewees demand a certain level of difficulty, or challenge and so choose their games accordingly, something articulated very clearly by Sam:

> You wouldn't play a game if it was too easy. You play a game for the challenge. You don't…don't play it because it's easy. Otherwise you'd play *Pong*[187] all the time. (Sam: 26)

While this is not the place for a detailed deconstruction of *Pong* (Atari, 1972), it is relevant to bear in mind its simplicity in order to fully understand what Sam is

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[183] Previously noted in the methodology chapter, it is worth explaining here what is meant by the term, 'thought junctions': every enemy, (noncombat related) object and branching pathway presents the player with a number of options and these occur at very high frequency. On encountering these, the player must decide which option to choose. These decision points are thought junctions.

[184] In computer game parlance, 'status' refers to the health of the player's character, or avatar. In *Ocarina*, 'status' is visualised through heart portions: the more complete (or recognisable) the heart shape, the healthier the player's character, 'Link'.

[185] Steven Johnson, in a discussion on Nintendo's follow-up game to *Ocarina*, *The Wind Waker*, terms this process, 'telescoping' (2005: 54).

[186] The first significant study was 'The Magical Number Seven, Plus or Minus Two: Some Limits on Our Capacity for Processing Information' by Miller, G.A. in *Psychological Review*, 63 (1956). The later study referred to is 'An Assessment of Fixed – Capacity Models of Visual Working Memory' by Rouder, J.N *et al* in *Proceedings of the National Academy of Sciences* (April, 2008).

[187] Atari's *Pong,* a shortened form of 'Ping Pong' is one of the earliest arcade machines.

expressing. *Pong* is a game with a single, simple objective: 'avoid missing ball for high score'[188]. It is a game, then, more of skill and reaction speed (a reactive, 'frantic' game type (Egenfeldt-Nielson, Smith and Tosca, 2008: 101-2)) than of challenges associated with the cerebral: there is little abstract thinking involved. In making his point and choosing this particular game with which to illustrate it, Sam is indirectly championing the messier, more analytical, cognitively challenging - or reflective, 'deliberative' games (2008: 101-2) - of which *Ocarina* is a prime example. As was made apparent by the cognitive playthrough, *Ocarina's* puzzles do not usually demand fast reaction speed, but require a great deal of thought, trial and error, or much 'probing hypothesising, rethinking and reprobing' (Gee, 2008: 90) of the game's playspace and objects, engendering the 'feedback loop' (Murray, 1997: 98) which leads to immersion. The following screenshot illustrates this. The player (as Link) must cut down the red Parasitic Tentacle in order to progress. But using the sword provides a health reducing electric shock. The solution is to use the boomerang; but for it to be to successful, it must hit the tentacle's weakest spot:

Figure 9: *Inside Jabu Jabu's Belly***: The puzzles of *Ocarina* provide the player with a reflective rather than a reactive form of play.**

Sam's comment then, along with those of other interviewees transcribed in this section which champion *Ocarina*'s puzzling gameplay, comports with Maslow's thoughts on self-actualising individuals:

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[188] These are the instructions printed on the original arcade cabinet. Quoted in Kent, 2001: 42

> Studies of psychologically healthy people indicate that they are, as a defining characteristic, attracted to the mysterious, to the unknown, to the chaotic, unorganised and unexplained. (Maslow, 1954: 24)

Certainly, the puzzles in *Ocarina* have consonance with the notions of mysterious, chaotic and unexplained and such puzzles are a great draw to the interviewees, their successful completion providing them with a deep sense of satisfaction, and self-esteem. This is a clear illustration of the 'craving for challenges that we can overcome, battles we can win and dangers we can vanquish' noted by Jane McGonigal (2011: 33). The satisfaction that gamers gain from overcoming such challenges is exemplified here by Colin's thoughts regarding the tests he faced in one particular temple:

> Depending on the puzzle depends on how proud I am of doing it. The Water Temple was the one for me. That was the proudest one I've ever done. The Water Temple is one of my favourites. (Colin: 11)

Colin's comment is one of many which refer to the difficulty of this temple and to the positive emotions experienced on beating, or completing, it. Daniel's is another:

> The Water Temple as adult Link. I've never [Laughs]…I've never been as mentally challenged by a game, even. It's just so stressful…it's such a…such a pain, but in some ways also the favourite part…my favourite part of the game because of how much it tests you. (Daniel: 9)

That Daniel still considers this 'stressful' and pain inducing section of the game as enjoyable (his 'favourite part', even) gives further credence to the suggestion of a correlation between difficulty and pleasure and satisfaction and echoes with Maslow's comment that 'self actualising people are…positively attracted' to the mysterious and the puzzling and 'selectively pick it out to puzzle over to meditate on' (1954: 161). This correlation between puzzle and pleasure is also revealed very clearly in comments from Dom ('I loved The Water Temple. It really was a tough challenge' (Dom: 3)) and Sam ('The Water Temple - it's literally the hardest temple I've ever played. I couldn't figure out how to get to [a particular room] and eventually when I got there I was like, 'Oh, I'm so proud of myself for doing that!''(Sam: 13)). It is, however, most thoroughly articulated in the comment from Alan below - the notion of challenge equalling enjoyment shining through:

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I'm just…I'm just a sort of gaming masochist. I just think that, you know, the more challenge the game gives you, the more you get out of it…it kinda challenges me as a person, challenges me to use my wit and intelligence to kind of work out a way to do this. And if you finally do it, you know...I think the harder it is, the more satisfying it is and that's really the reason I enjoy particularly difficult games. (Alan: 6-11)

Such comments reflect Loftus and Loftus' thinking on Maslow's thinking on cognitive needs. From the very beginnings of his work on Being values, or higher needs, Maslow asks questions about the benefits of cognitive satisfactions, or 'the lift that comes with insight, the calming effect of understanding' (1954: 173), speculating on the problems which will arise if such needs are left unfulfilled: 'Probably, there are true psychopathological effects when the cognitive needs are frustrated' (1954: 173). These comments on puzzle solving are also in keeping with Maslow's thoughts on self actualising people generally, who 'are not dependent for their main satisfactions on the real world, or other people…rather they are dependent for their own development and continued growth on their own potentialities and latent resources' (Maslow, 1954: 136). The potentialities and latent resources in the case of my interviewees here are, of course, those related to their cognitive reasoning.

Figure 10: *The Water Temple***: Interviewees identify this temple as one which presents a particularly difficult set of puzzles: 'I've never been as mentally challenged by a game' (Daniel: 9). Image Copyright Nintendo**

A sense of Maslovian challenge and self actualisation is not only found in completion of puzzles and other challenges within the dungeons, but also, on occasion, in the section

of the environment, or virtual playspace, that allows for a freer sense of pure play[189]: the overworld. That some level of cognitive challenge is ever present in *Ocarina* - whether it is in hunting for hidden objects, in exercises in orientation or in devising optimal routes across the landscape - is, therefore, very clear. Extracts from, and discussion of, interviewees' comments relating to the latter two types are provided below:

> I remember this one time…where I could not figure out how to enter Lake Hylia. After a small amount of time studying the map, I noticed that a river flowed through Gerudo Valley and into the lake. I figured this was my best chance, so I made my way to the valley and jumped off the bridge and into the water. To my satisfaction, because I had never encountered something like this in a game before, I went with the flow all the way down to the lake. (Mike: 3)

Mike's pride in this achievement is obvious, from his drawing attention to the speed of his comprehension, to the descriptive detail provided to describe his actions to the word chosen to describe his feelings on successful completion of his experiment in orienteering. There is also, of course, reference here to the uniqueness of this particular game. Sam does not offer the same detail as Colin in regard to the description of the following challenge, but his comment is significant in again highlighting the challenges that exist beyond the temples:

> My favourite ever part of *Ocarina of Time* is: The Biggoron Sword Quest. It's a challenge. It's the hardest thing to do in the game because there's so many timed things to do. (Sam: 25)

Both spatial and temporal challenges are noted in this extract, though repetition places emphasis on the former suggesting that, for Sam, it is successful completion of this condensed timing that provides the greatest challenge.

Finally, interviewees note satisfaction and a sense of achievement in completing entire temples or the game as a whole. This satisfaction is again attributed to successfully finishing *cumulative* challenges, as expressed by Dean below:

> Every time I did a dungeon I wanted a Seal and that was...that was another step and I'd feel...I'd feel like a sense of achievement after having beaten the Boss of

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[189] In the sense discussed by Roger Caillois, noted in chapter two.

that dungeon. Then I'd go on to find the next thing and that would be the next one. (Dean: 15)

Michelle also speaks of the satisfaction in completing such cumulative challenges:

At first, the feeling on completion was a mix of pride, relief, release of tension. Now it's a comforting feeling of pride and the satisfaction of chipping away at a mental checklist of things to accomplish for that day. (Michelle: 8)

With their focus on self-identified challenges and their resulting rewards, there is not only the suggestion of Maslovian autonomy here, but also hints of how *flow* theorist Mihaly Csikszentmihalyi says people achieve happiness, by becoming '…free of societal rewards and learn[ing] [substituting] for them rewards that are under one's own powers' (Csikszentmihalyi, 1992: 19). What also makes Michelle's comment so interesting is its spanning of, and clear distinction between, the original and later playthroughs. Another of Michelle's responses makes it clear that these playthroughs are separated by several years. The word 'pride', appearing twice, suggests her satisfaction is undiminished by familiarity, and finds sympathy with Maslow's belief that 'self actualising people have the wonderful capacity to appreciate again and again, freshly and naively, the basic goods of life with awe, pleasure, wonder…'(Maslow, 1954: 136).

Daniel also speaks of completion of the game as a whole and his comment is important in illustrating computer gaming, or more specifically, the successful completion of the challenges they contain, as something of personal, long-lasting value, something which challenges the media stigmatisation of gaming as 'anything other than a puerile activity at best, and a psychosis-inducing engagement at worst' (*Edge* #190: 2):

[It is a sense of achievement] that you feel period, like you've done it. An achievement like you would if you'd got a good mark in an essay in school or something. Or a good mark in an assignment, it's a similar sort of feeling. You've achieved something that's not actually a waste of time. The feeling that. 'I've...I did that. That was me.' Because I think that's what some people's perception of gaming is- it's sort of a waste of time. But when you get that sense of achievement that you've completed something, it's like, 'Right, I've done that; that's...that feels good. (Daniel: 10)

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The belief that in-game achievement has lasting value is also expressed by Colin, with the words 'there's nothing I can't do' being especially powerful.

> It's just an achievement to myself, really. Just to know that, er, I can do it. I mean, there are some games I didn't think I would ever complete, like what I was saying before [with], *The World Ends With You.'* But when I did complete it, I thought, 'Oh brilliant.' Playing a game saying, 'Yes I can do this. I can do this. This is what...there's nothing I can't do.' I like to think that. (Colin: 11)

Such comments from the interviewees on such challenges, and especially their feelings on overcoming them, agree exactly with Maslow's thoughts on the importance of intellectual exercise and achievement, with him seeing the, '…overcoming of obstacles, the occurrence of pathology upon thwarting…the necessity of gratification of this need as a prerequisite for the fullest development of human potentialities' (Maslow, 1954: 25). A trace of such feelings on achievements can also be found in the interviewees comments regarding the collection of *Ocarina*'s virtual objects, and these are noted below.

3.2 *Form and Completion: Collecting*

In a short piece on aesthetic needs written in 1954, Maslow touches upon the desire to acquire those things which appeal to us:

> The aesthetic experience may lead to various simple, habitual responses, such as collecting the particular objects that give so much pleasure…In general here we may speak here of appreciation, fun pleasure and connoisseurship. (Maslow in Hoffman, 1996: 43)

It is also worth considering here the work of cultural theorists Brenda Danet and Tamar Katriel, (1994) who in identifying the personal importance and sociological significance of collecting, conclude that, 'collectors objects and activities carry a rich set of meanings for them that have little to with commercialization' (in Riggins, 1994: 50).[190] Danet and Katriel introduce five metaphors for collecting and two of these in particular

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[190] Their discussion of collecting was first considered in a game studies context by computer game scholars Dario Compagno and Patrick Coppock in their essay, 'World of Warcraft as Collectors Paradise' In Cuddy, L. (ed.)*The World of Warcraft and Philosophy* (Open Court, 2009).

are particularly useful in illuminating the collecting done by the interviewees in *Ocarina.* These two metaphors are *Collecting as Hunting* and *Collecting as Passion.* As regards the first, they write:

> To pursue game, prey, prizes – especially if such items are sought and not just the chance discovery at a flea market - is an attempt to incorporate desired items into the grand plan of one's collection, and thereby to pursue order. (1994: 38-39)

As will be seen below, this is what the players of *Ocarina* do. They rarely simply stumble across items, they seek them out, hunt them down, and through completion they create order. The second of Danet and Katriel's metaphors is *collecting as passion*, and of this, they say:

> One of the most striking and most common sets of metaphors in discourse about collecting is the cluster surrounding the notion of passion. This cluster includes related motifs of desire, passion, love, possession. (1994: 41)

Many interviewees note the pleasure in such acquisition or possession. Dean, for instance, calls himself a 'completionist' (Dean: 7) something he relates to all aspects of *Ocarina*, including item collection: 'It's definitely satisfying to collect things' (Dean: 21). Lesley, his partner, is equally enthusiastic:

> There's so many different things to do that aren't in the main quest, like getting all the Skulltulas[191]...and, er, yeah trying to get all the quivers and all the arrows...it's just a bit...a bit kind of...a bit obsessive compulsive in a way. (Lesley: 6)

Lesley is clearly in awe here of the quantity of items available. The desire to collect and the pleasure in striving to build a complete collection is returned to later in her narrative, in which she notes the pleasure in being able to see her treasures:

> In the, er, game menu, there's always slots for stuff that you haven't got. So when you got, you've got a full screen, it's pretty cool to see what you've got. Er, yeah, I did like that. (Lesley: 17)

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[191] Here, Alan is discussing Gold Skulltulas, golden facsimiles which replace defeated originals (simply, Skulltulas) which can then be collected. Their name, presumably, derives from a conflation of Skull and Tarantula, and this name is in-keeping with their physical appearance.

This joy to be found in the visual representation or validation of collected items is shared by other interviewees. The extracts from Sam's, Lee's and Dom's narratives illustrate this:

> I loved the menu screen, with being able to move 'round, being able to see the map, see songs and stuff you'd collected, see weapons and clothes…all the different clothes and the shields. I loved it. (Sam: 20)

And:

> I like having a sort of thing where you can see all your items, especially since you can see how many you've got left to get maybe, if there's spaces and things and sort of thinking, 'Oh, I haven't got one yet, so I'm gonna get one soon, maybe. (Lee: 7)

And:

> I get really happy when I get 20 hearts too, or those 100 Skulltulas. (Dom: 3)

The most thorough consideration of this type of item comes from Lee:

> I like getting...getting all of them. I think, now that I play it now, I sort of try to get everything as perfect as possible. Before I might not have, erm, bothered so much with the details, but I try to collect everything, get all of the heart pieces and it takes a long time it's...getting all of the Skulltulas and stuff. So in...or collecting 100% of everything there is to get and stuff does give you a sense of achievement. It's...it's nice if it sort of rewards you for doing everything and then you sort of...if it rewards *you*, then you feel rewarded I suppose [laughs]. (Lee: 12)

Like the interviewees noted before him, Lee is, first and foremost, noting the enjoyment of complete collection and acquisition. Helpfully, Lee also explicitly notes the sense of achievement complete acquisition brings. This sense of achievement is much like that discussed by the interviewees in this category's first sub-area above. While such collecting may be seen as empty addiction, such an interpretation is invalid here: interviewees feel a sense of achievement that simply does not come with addiction. There is a slightly greater possibility of identity being formed through such item acquisition, that the items collected contribute towards the interviewees' store of gaming capital. This also, however, does not appear to be the case. The interviewees do not identify item acquisition as something they brag about, or even discuss with others.

What this acquisition most definitely *is* about, then, is '…a means to strive towards a sense of closure, completion or perfection' (Danet and Katriel in Diggins, 1994: 24); an attempt by the interviewees to fulful Maslow's higher needs, particularly those of 'wholeness (organisation; structure; order)' and 'completion; (finality; justice; 'it's finished'; fulfilment, *finis*)' (1962: 94-94).

Finally, it needs to be noted that items are also enjoyed for their interactive properties, properties which allow the interviewees to indulge in the type of free play as noted by Huizinga (1955) and Caillois (1958), and this is discussed in the final of this chapter's segments. Of course, interaction with all items increases players' participation in the virtual playspace and has the potential to increase their sense of immersion.

3.3 *Form and Completion: the Quest for Narrative Resolution*

For many interviewees, enjoyment is to be found in striving to make the game's fictional universe coherent and complete. This is achieved by repairing holes in the game's narrative by creating, contributing towards - or by subscribing to - theories proposed by others. Such striving for narrative perfection by fans of pop-culture texts is noted by Henry Jenkins, who sees media objects as portals to a world that is collectively shaped and imagined by the audience: effectively creating a meta-narrative. He first notes this in his 1992 book *Textual Poachers* when describing *Star Trek* fans' 'desire for continuity, consistency and completeness' (Jenkins, 1992: 102), later noting that 'the world is bigger than the film, bigger even than the franchise – for fan speculations and elaborations…expand the world in a variety of directions' (2008:114). The fact that *Ocarina's* story, and the narrative of the series as a whole, is somehow flawed is expressed here by Michelle:

> Much like the *Bible*, discrepancies are definitely there, but that makes theorising
> debates that much more robust. (Michelle: 6)

Michelle's comment is one of many that note not only textual inconsistencies but also the pleasures they inspire. These discrepancies are recognised for what they are and not ignored or subjected to cognitive dissonance in any way. They instead offer pleasurable

opportunities to exercise intellect and creativity[192], similar to the discrete puzzle solving noted earlier and resonating with the creative characteristic of self-actualising people recognised by Maslow, a creativeness 'projected out upon the world or touches whatever activity the person is engaged in' (1954: 142). The amount of creative theorising that takes place and the level of admiration it inspires is perhaps best illustrated by this comment from Mike:

> For any hardcore *Zelda* fan, even the absence of story is a great thing. Take Bongo Bongo [the 'boss' of *Ocarina's* Spirit Temple] for instance. There is just a few lines mentioned about his origin in-game. Take some hardcore *Zelda* fans with a mind for theorising and they put together the most likely scenario from the smallest evidence left inside the game by the developers. (Mike: 3)

While this extract highlights Mike's connection to the fan community and therefore the satisfaction of a social need that is facilitated by the game - such as discussed in the previous chapter - the main value in this comment is in how it underlines the cognitive and creative activity engaged in by *Zelda* fans in their attempt to create a complete fictional universe. The admiring, almost deferential tone, to this extract, suggests that Mike takes great pleasure in these theories posited by others. For the majority that speak of it, the theorising is often focussed on a single area: an attempt to rectify, or patch, just *one* apparent shortcoming in *Ocarina's* narrative:

> One of the main *Zelda* theorizing arguments is over the split timeline theory and what may have transpired upon Link's return to childhood. (Michelle: 9)

Andrew provides detail on this 'split timeline theory':

> Well, you can see that there's the end of *Ocarina of Time*, Zelda sends him [Link] back in time so there's, like, Zelda's Hyrule which she's sent him back from and there's Link's Hyrule which she's sent him back to. And in the latter one, he goes on to *Majora's Mask* and apparently through the years it becomes, er, *Twilight Princess*. Whereas at the start of *Wind Waker*, it says, erm, 'The people needed the hero and they asked for him but no hero ever came.' That's because [Princess] Zelda sent him back in time to some alternate universe and so

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[192] While Michelle's reference to the *Bible* may simply be been one of convenience, it is more likely being used as an analogue, with her viewing both it and *Ocarina* as rich, multi-layered pieces of work open to interpretation and her gaining a satisfaction and pleasure by engaging with this complexity.

that's why the gods were like, 'Oh right. Here's some rain.' I discuss this all the time. (Andrew: 3)

The final line of this extract implies that Andrew's enjoyment of theorising arises from a desire for coherence: he wants the narratives of the *Zelda* games to make sense both discreetly and within the wider context of the series as whole. Andrew's comment only refers to one inter-game narrative connective ('The people needed the hero'), and this is because, by and large, such conjunctions do not exist. The fact that Andrew does, then, still speak of narrative dovetailing with such confidence demonstrates exactly how satisfactorily these fissures[193] have been filled (either by him or for him) in his mind. Sam also discusses this narrative branching:

> I mean, the way I see it, *Ocarina of Time* and *Majora's Mask* - it's two separate timelines. It's…there's a timeline where Link goes in the Temple of Time, saves Hyrule and gets sent back but…and the other timeline, Link has already saved Hyrule and now he's [Navi] left him because he's not a Kokiri and only Kokiris get fairies. So he's [Link] gone in search of Navi, his old friend. Because if you notice, he doesn't have Navi with him in *Majora's Mask*, he has Tatl. (Sam: 19)

This extract shows that, as for Andrew, Sam takes pleasure in attaining clarity, integrity and completeness in the *Zelda* series' overall narrative. Awareness of narrative cohesion is, of course, present in the findings of the cognitive playthrough (As part of the mental topography): the desire for a happy ending being part of the motivation for play.

Narrative dovetailing of the series as a whole is also discussed at some length by Phil, betraying his desire to adhere to theory formulated by *Zelda* fandom, the theory in this instance regarding the world presented in *Ocarina's* successor, *The Wind Waker*. In this particular narrative branch, Hyrule has been flooded by the gods and islands in its vast oceans are the hills of *Ocarina's* world, 'just the tops of mountains where, like, elements of the cultures from down below are still existing. It was really cool' (Phil: 18). This desire for narrative cohesion can certainly be understood in self-actualising terms, specifically as an attempt to create order, with, '[a]spects like incorrect

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[193] Henry Jenkins terms these ways of improving narrative cohesion as 'recontextualisation' (Jenkins, 1992: 162).

proportions and displeasing arrangements seem to call out in us the impulse to rearrange, to improve and to correct' (Maslow in Hoffman, 1996: 44).

Finally, that a happy ending is preferred is made clear, in this closing comment from James:

> The ending sequence - members of all the *Zelda* races dancing around some oddly colored fires in Lon Lon Ranch - is definitely one of my favourite scenes, along with the scene in the same sequence of all the sages standing together on Death Mountain. (James: 4)

That the interviewees value a happy conclusion to *Ocarina*'s story should not be surprising, as responding to such positivity is something Maslow identifies in self actualising people, individuals who 'delight in…bringing about justice, in stopping cruelty and exploitation, love virtue to be rewarded and seem to like happy endings, good completions' (Malsow, 1969: 289). Maslow also writes, of course, that people in the 'being realm' of self actualisation are drawn to 'playfulness; (fun; joy; amusement; gaiety; humor; exuberance; effortlessness)' (Maslow, 1962: 93-94) and play is the subject of this chapter's next section.

4: Varieties of Play

Finally, interviewees discussed the freedom *Ocarina* gave them to express themselves and be creative. Such creativity has resonance with the *free* sense of play outlined by Caillios and Huizinga and discussed in chapter two. In other words, in addition to providing its players with set challenges, *Ocarina* allows its players to forget about such rule bound practices to instead indulge in more expressive and experimental ones. This is facilitated by the environment itself, useable items, or a combination of both.

Phil frames the joy of playful expressiveness within the context of childhood, and the disappointments of adult life. *Ocarina*'s environment and objects satisfy expectations that remain unrealised in the real-world:

> When I was younger, I always used to think that when I'm grown up, I'm just gonna do whatever I feel like. It'll be great not to have all these things…people telling you what to do. And then when you do grow up, you have responsibilities

> - bills to pay and stuff like that. But the feeling you get in the game, where you do feel like you're a child who's been given a sword and the chance to run around in a grown up world is good. You're off in this world and you're just rolling around - literally - and just playing with stuff. (Phil: 17)

In a sense, Phil can be said to be experiencing the large *playspace* of the game and its objects the way Jean Piaget argues that a baby experiences their world. This, as noted in chapter one, is as something completely novel to be explored and tested. In the world of *Ocarina*, for instance, when the player first takes control of Link, they use him as their arm, fist and mouth to determine the most 'suckable' – or pleasing - objects: the long grass hinders running, but the short grass doesn't, jumping from on high hurts (conveyed by the unpleasant haptic feedback), but low jumps do not; small crates can be smashed to reveal more rupees and health, while attempting to smash larger ones causes only more haptic backlash. Again, to use the words of Piaget scholar Peter Richmond, 'all objects do not have the same suckable properties' (1970: 8). Though the player, like the baby, learns from this exploration [194] and adapts his behaviour accordingly, this early stage of engagement with the game is one of playful abandonment. It echoes David Surman's comment on the new player who 'explores the gameworld with the clumsy curiosity of a toddler' (Surman in Atkins and Krzywinska, 2007: 205). Such childlike playfulness or 'clumsy curiosity' is clearly expressed by Sam, who, like Phil, enjoys experimenting with objects in the game environment:

> I just loved the Megaton Hammer. You get to hit things with it. And I just loved the sound that it made – DONG – [laughs] when it hit anything. Even if you hit, like, ice it went DONG [laughs]. (Sam: 22)

It is worth noting Sam's mimicking of the game's diegetic sound, which suggests, for him a great deal of enjoyment stems from this alone. This is especially the case when sound is produced as result of his purposeless action, particularly when those sounds are most unexpected.[195]

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[194] This can be compared to James Paul Gee's 'Probe, hypothesise, reprobe, rethink' theory noted in chapter four.

[195] One explanation of the source of such pleasures have also been discussed in both games studies and in less academic circles, with computer game columnist Stephen Poole perhaps being the first to articulate the joys experienced from the inverse effort to action ratio, terming it, 'amplification of input' (Poole, 2000: 181).

Game objects in general gave great scope for playful experimentation. Lesley's enthusiasm is representative of the group as a whole:

> I really like the bow. And the Longshot is awesome as well. Erm, I love the iron boots and the Goron Tunic as well. I think...I think the...with the boots and the tunic it's all that much more freedom. It's kind of that more bit fantastical. Erm, reall...it's really cool. (Lesley: 19)

The sheer amount of items Lesley mentions along with the positive language used to discuss them, makes this comment significant. Terms such as 'awesome', 'like', 'love' and 'cool' highlight the affection in which these items are held, while terms such as 'fantastical' and 'freedom' highlight the creative playfulness such objects inspire. Dean's almost identical language also emphasises how pleasurable such items are to simply play with ('like' 'love, 'fun' and 'cool'), while his comment on 'escapism' suggests a sense of playful abandonment:

> I like the bow for the game in the, er, canyon where you're riding Epona and shooting. I used to love that game. The Boomerang and the Hookshot is def...definitely escapism. It's like, if you had this in real life, it would be so cool. But you don't. (Dean: 20)

Dean's final line is particularly interesting in regard to this desire for abandonment, but awareness of it being impossible out of the world of the game, against all accepted social and legal conventions. Dean is treating the virtual playspace of *Ocarina* as a safe - and therefore perfect - environment in which desires for such actions can be satisfied, a view also expressed by Sam, whose questions evoke a sense of Maslow's belief that self actualising people are 'fixed on ends rather than on means and means are quite definitely subordinated to these ends' (Maslow, 1954: 141):

> Who doesn't want to smash something in the face with a Megaton Hammer!? Who wouldn't want to, like, Hookshot onto a wall and fly through the air and, like, be standing on the edge of a wall with metal sticking into it? (Sam: 22)

Here, of course, the means of killing an enemy or traversing a gap become ends in themselves, exemplifying Maslow's belief that for self actualising people, '…the most trivial and routine activity [can become] an intrinsically enjoyable game, dance or play'

(Maslow, 1954: 141). One item in particular draws more comment than any other regarding its expressive properties and this item is the ocarina[196]. As is seen below, respondents speak of this with great enthusiasm. Most of those that comment are united in viewing the ocarina as a valid musical instrument:

> I loved how you would learn songs and actually play an instrument. Since I am a musician and composer, this was incredible to me! I remember playing all kinds of songs on that ocarina. (Dom: 2)

The suggestion here is that Dom sometimes turned to *Ocarina* solely to access this particular item. There is also something more in this comment, namely the significance of the desire to create via this virtual instrument over a real one (which as a musician and composer Dom must, presumably, have access to). This suggests that there is a unique pleasure in doing so, that people are offered a specific experience through computer game play that cannot be gained through engagement with any other kind of object. Also, in addition to suggesting the playing of existing pieces, Dom's final line also implies the composition of new ones, something Daniel too enjoys:

> I liked the ocarina itself, just playing the songs on it and then creating your own song. (Daniel: 9)

This comment while similar to Dom's is of especial interest because this time there is no suggestion that Daniel plays a 'real' instrument: for him, the ocarina is 'real' instrument enough. Daniel's identification of the enjoyment to be had from being purely creative, reinforces the notion of this particular object being, at times, somehow separate from the game to which it belongs. The idea of this item in itself providing pleasure is more thoroughly explored in a long exchange between Dean and Lesley, an exchange which includes a deconstruction of the links between the controller, a real musical instrument and the virtual instrument on screen:

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[196] There are two ocarinas in the game and the interviewees never explicitly identify which of the ocarinas they are referring to - the Fairy Ocarina or the Ocarina of Time. It is likely that they are referring to either, that for them they are interchangeable in this context of non-ludic or non-contextual play.

L: if you move the controller around, if you move the joystick round when you press the button down it kind of changes whether it's...I don't know music [to Dean] is it flat, or..?

D: Erm, it's probably...an ocarina is...is set for a particular scale. So, I think the one in *Zelda* is C major, but I'm not sure...which would also be A minor, 'cause it's the same group of notes. Erm then I'm guessing that...that moving the joystick would shift that to say D major or...

L: Yeah, and the shoulder pads do different things, like it warbles and stuff like that so you can play...you can play pretty much anything. (Lesley and Dean: 23)

Such playful creativity is in-keeping with Maslow's thoughts on the satisfactions of what he terms expressive inventiveness:

> Expressive inventiveness needn't be communicative or social at all…For example, a purely expressive painting may not have meaning for anyone other than its creator. Regardless of the painting's actual beauty, it may give its creator great pleasure and emotional release. (Maslow in Hoffman, 1996: 44)

That music - both its consumption and creation - brings a multitude of benefits is well documented and the literature is vast, with music therapy, and music psychology being established subfields of psychology. [197] Perhaps most relevantly for this study is some recent (Lamont and Knox, 2008) work on *virtual* instruments and their benefits to children with cerebral palsy. Using a specially designed piece of software - the VMI (Virtual Musical Instrument) - children with disabilities were able to play a musical instrument using gestures. The findings of the study were quite astounding:

> The results show that the VMI enhances children's feelings of competence. It also enhances their physical, cognitive, communicative, emotional, behavioral, and social functioning. It helped children with CP to see beyond their disabilities. (Lamont and Knox, 2008: 65)

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[197] The literature on computer game music in itself, however, is comparatively sparse, often restricted to the occasional chapter in edited collections. This situation may change in the wake of the first book dedicated to the topic, Karen Collins' *Game Sound* (2009). Importantly, Collins discusses the part user input - or interactivity - plays in computer game music. She notes: 'Unlike other forms of media where the audience is a 'passive' receiver of a sound signal, game players play an active role in the triggering of sound events in the game (including dialogue, ambience and sound effects). While they are still, in a sense, the receiver of the end sound signal, they are also partly the transmitter of that signal, playing an active role in the triggering and timing of these events' (2009: 3).

With the emergence and mass uptake of motion control technology triggered by the arrival of Nintendo's *Wii*, [198], it seems entirely possible that such software need not be restricted to clinics, with benefits derived from the playing of a musical instrument available to those who, for whatever reason, may not ordinarily have access to one.[199]

All of the above properties of *Ocarina*, and the significance of their effects on my interviewees is summarised below, in this chapter's final section.

5: *Ocarina of Time* and Abraham Maslow

Many of the comments from the interviewees resonate strongly with Maslow's theory regarding the higher needs, the most thorough discussions of which are in the third edition of *Towards a Psychology of Being* (1968, 1999) and *The Farther Reaches of Human Nature* (1969).[200] One chapter in particular from the latter - entitled 'A Theory of Metamotivation' - provides as clear and concise a discussion of the higher needs as can be found anywhere in Maslow's output. Here, Maslow uses Kurt Goldstein's term 'self-actualising' (Goldstein, 1934) to refer to those whose basic needs have been met and are now able to seek higher level satisfactions.[201] Helpfully, in this chapter, Maslow provides three tables relating to the higher needs, the first of which is particularly useful here[202], being a list of 'testable propositions' (1969: 289) entitled 'Motivations and Gratifications of Self Actualizing People…' (1969: 298). The second - the list of B (or, Being) values - while also extremely useful, may seem rather repetitive if also transcribed here, and has already been provided as appendix 1. Here, then, it is simply

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[198] Sony launched their version of motion control – *PlayStation Move* - in September 2010, while Microsoft launched theirs - *Xbox Kinect* – shortly afterwards, in November 2010. As of August 2011, *Kinect* '…is in ten million homes' (*Edge*, #231: 10).

[199] This is despite the differences between the actual playing of real and virtual instruments, as discussed by Graeme Kirkpatrick ('Movements and actions performed with [controllers] do not resemble actions performed in other contexts, despite efforts to interpret them in terms of mimetic relations of resemblance…' (2011: 89)) and Jesper Juul ('[Playing] *Guitar Hero* is different from playing the guitar' 2009: 114). Juul also notes, however, that such games, 'make it easy for players to experience competence…to complete a rock song' (2011:89), reinforcing the argument made in the body text.

[200] It must be noted, however, that higher needs and self-actualisation are also discussed extensively in *Motivation and Personality*.

[201] Maslow does note that not all of those who achieve satisfaction of basic needs seek the satisfaction of higher ones. In other words, he acknowledges the existence of pathology (Maslow, 1968).

[202] The other, Table 2, is less useful here, detailing 'meta-pathologies'.

worth noting that it is includes such values as truth, goodness and beauty. So, from the list of 'testable propositions' (1969: 289), self-actualising people:

> Delight in bringing about justice.
> Delight in stopping cruelty and exploitation.
> They love virtue to be rewarded.
> They seem to like happy endings, good completions.
> They are good punishers of evil.
> They try to set things right, to clean up bad situations.
> They enjoy doing good.
> Their fighting is not an excuse for hostility...but is for the sake of setting things right. It is problem centered.
> They respond to a challenge in a job.
> A chance to improve the situation is a big reward. They enjoy improving things.
> They tend to be attracted by mystery, unsolved problems, by the unknown and the challenging.
> They enjoy bringing about law and order in the chaotic situation.
> They uniformly consider their work to be worthwhile, important even essential.
> They enjoy greater efficiency, making an operation more neat, faster. (1969: 289)

Essentially, these motivations revolve around the finest human aspirations and ideals, and this corresponds to Maslow's core psychological philosophy discussed in chapter one, namely that people are fundamentally good and, given favourable circumstances, will strive to improve themselves. Maslow argued that the failure to find opportunities to satisfy such motivations or experience such values leads to pathologies or, 'the sickness of the soul' (1969: 43). Specifically, argued Maslow, deprivation of these needs leads to pathologies which include feelings of 'nihilism, feeling oneself to be not really needed, bleakness, hopelessness, bewilderment, depression and despair' (1969: 318).

So, how might the aesthetics of *Ocarina* help prevent these meta-pathologies and promote the acquisition of such B-values? To begin with 'Spectacle', Maslow is quite clear on the importance of visual beauty, writing about it in not only his key texts[203] but also his more obscure essays and papers. In an unpublished lecture of 1966, for instance, he makes the following observation:

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[203] The key texts are here being defined as *Motivation and Personality* (1954), *Towards a Psychology of Being* (1968) and *The Farther Reaches of Human Nature* (1971).

What would it be like to live every day in a totally ugly world in which beauty no longer even existed? Well, we have plenty of ugly places around us…and we can see what these do to the human spirit. [The] metapathologies are systemic diseases and, therefore, affect the individual's whole mind and body. (Maslow in Hoffman, 1996: 94)

Similarly, in an unpublished article entitled, 'Living in the World of Higher Values' written 'during the mid-1960s' (Hoffman, 1996: 73), Maslow notes that psychologically healthy people actively seek beauty for its own sake, mirroring thoughts expressed in *Motivation and Personality* ('We can enjoy a painting without wanting to own it, a rosebush without wanting to pluck from it' (Maslow, 1954: 155)). In the article's checklist for how psychological growth can be achieved, is the following advice:

Get out of the deficiency world by deliberately going into the Being- realm. Seek out art galleries, libraries, museums, beautiful or grand trees, and the mountains or seashore. (Maslow in Hoffman, 1996: 76)

Consciously or otherwise, the interviewees sought out beauty when they purchased and engaged with *Ocarina*, a game which, at the time of its release, presented a major improvement in console-game visuals.[204]

This love of something for its own sake (or Alan's 'own reward' (Alan: 15)) is also found in the interviewees' love of item collecting, which comports with Maslow's concept of 'being-love':

The point at which a corner is turned is when the love becomes so great and so pure for the object itself that *its* good is what we want, not what it could do for us i.e. when it passes beyond a means and becomes an end…Real love then is (sometimes at least) noninerfering and nondemanding and can delight in the thing itself. (1969: 136-137)

Then there is the interviewees' desire for order and completion which is derived through the completion of puzzles and the patching of narrative inconsistencies, finding

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[204] This has been restated in the popular press as recently as August 2010: 'Superficially, OoTs biggest innovation was that the whole shebang was now 3D, lending itself to many a breathtaking moment as the sun set over a vast Hyrule field' (*SFX Magazine* #199: 146)

sympathy with Maslow's understanding of cognitive need satisfaction, which he saw as especially important to people:

> The gratification of the cognitive impulses is subjectively satisfying and yields end-experience. Insight is usually a bright, happy, emotional spot in any person's life, perhaps even a high spot in the life span. …all these point to a basic cognitive need. (1954: 25)

Suggestions of such gratification is evident in the interviewees responses in these areas, which sometimes even hint at elements of the peak experience ('…transient moments of self actualization… moments of ecstasy…' (1971: 46), implied though Michelle's references to 'relief' and 'release of tension' in her discussion on completion.

Similarly, there is the enjoyment interviewees take in the vast portion of *Ocarina's* story that *is* coherent, its tale of good and evil, with everything in it connecting to Maslow's 'B values' and 'testable propositions'. Here is a virtual world of playfulness, meaningfulness, and if played well – that is, not only with skill, but on the side of moral right - justice: evil is defeated and Hyrule returns to a beautiful idyll. Maslow argues that self- actualising people, people who constantly seek the satisfaction of higher needs, 'seem to like happy endings, good completions.' And these *are* good completions. In *Ocarina*, a physically beautiful, morally sound, world is being destroyed by evil and the interviewees want to reverse this destruction. Indeed, in an unpublished article written in 1968, Maslow notes that 'people who are fully evolved tend to take as their greatest reward, metagratifications. Such men and women are most happy when they are advancing beauty, excellence, justice or truth' (Maslow in Hoffman, 1996: 71).[205] Also, of course, Kant's and Schiller's notion of this beautiful environment representing good, or moral rightness, also resonate strongly with the interviewees view of *Ocarina*'s virtual playspace and story.

As a final point regarding such Maslovian consonance there is the playful expressiveness and creativity indulged in by the interviewees in *Ocarina's* huge virtual

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[205] This is something Maslow believes is important not only for higher need gratification and self actualisation but for basic needs too, specifically esteem needs: 'Some form of participation in, or identification with, a worthwhile cause may be essential for any human being to feel a healthy and strong self-esteem' (1965: 10).

playspace, whether that is rolling around Hyrule field, fishing, riding the game's horse, Epona, or creating songs with the ocarina.

As with chapter four, however, not everything the interviewees say regarding *Ocarina*, the wider *Zelda* series, or computer games in general is positive or matches Maslow's theories. Some of the dissatisfactions are concerned with single instances. Dean, for example, complains about the difficulties in catching the drawbridge into the game's town, Hyrule Castle Town, ('because it's all over, like a ten minute cycle and you can't get in and then you've got to hang around and wait' (Dean: 11)), while Colin finds frustration in trying to win a seemingly impossible race: 'No matter what you do, he will always beat you' (Colin: 7).

Other negative comments regard more general elements of the game. The menu system, while accepted by most, is disliked by some, with Andrew noting, 'It detracts from the experience when you go onto a pause menu and select all your items from there. It detracts from the realism when you look at all these items from the menu and how many boxes you have. Does he carry them all in his hat?' (Andrew: 5-6). There are other instances of game aesthetics frustrating rather than providing Maslovian satisfactions. Lee, for instance, dislikes the text based dialogue of *Ocarina*:

> There's nothing more annoying…than text that just carries on for ages and ages. They just expect you to have a really low reading age or something, and you start getting...you can't skip forward a bit so you can't read the next bit - you start getting bored (Lee: 7).

This is similar to Sam's frustration at *Ocarina's* only-just anthropomorphised help (or navigation system), Navi:

> Navi was like a tutorial and I didn't need a tutorial. I never…like…whenever I get a new watch or anything like that I never read the instructions – I prefer to work it out for myself. So Navi just going, 'Hey, listen!' and then when I'd think, 'Right, Navi's a tutorial, I don't want to listen to her.' She still keeps on going, 'Hey, listen! Hey listen!' It drove me insane. (Sam: 19)

Such grumbles also extend beyond the fiction of the game to include the controller ('I think it's rubbish to be honest. I mean, you need three hands to use every button. You

have to be Zaphod Beeblebrox'[206] (Andrew: 4)). There are also cases where the game itself is not seen as deficient, but rather the interviewees themselves. Some become stuck on a puzzle which, in retrospect, seems incredibly easy ('I was running around the prison saying 'I've missed something' (Colin: 6)), while Lesley, for example, struggles with recalling the melodies for the ocarina that play of the game demands: 'I'm crap at trying to remember the stuff, so I didn't particularly enjoy that' (Lesley: 5).

There are also dissatisfactions with other installments in the series. Some dislike particular games outright, games that are either too similar ('With *Twilight Princess*, what I found unsatisfying about it was that it felt sort of like a rehash of what had been done before. Alan: 20), or too different ('[sighs] *Majora's Mask*. Let's not talk about *Majora's Mask*. It was...it was good but not great. I mean I wasn't…I dunno, I wasn't that keen on it, on the whole mask system and having masks that you got and then didn't ever use ever. I don't know. It never really clicked with me' (Sam: 3-4)).

However, as in chapter four, the negative comments here are also difficult to find. Importantly, of those few negatives that do exist, many serve to support positive points made in the chapter. For example, Lee's irritation with text speed, Sam's objection to Navi and Dean's dislike of being made to wait, all stem from diminished opportunities for interaction. [207] Similarly, tensions arising from the menu system and controller, relate to being somewhat disassociated with the main game and the resultant break in immersion.

Also, grumbles about other *Zelda* games once more serve to underline discussions in the main text about what the players *do* like about this one: Alex's concern with the recycling of old ideas in *The Twilight Princess* rubs against interviewees' desire for challenge, while the narrative of *Majora's Mask* is far removed

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[206] A three armed, two headed character from Douglas Adams' *Hitch Hiker's Guide to the Galaxy* series of novels and radio plays.
[207] Sam's comment also suggests a desire for independence or autonomy in solutions to analytical tasks and irritation and frustration when he does not get it. This theory is supported by another of Sam's comments regarding *Ocarina's* 'special items': 'I never used them, never. I saw it as cheating. 'Oh I've got …I've got an extra shield. I've got a mirror shield or a Hylian shield, that's all *I* need. I [also] felt a bit cheated when I got a skull that made it…erm, off The Great Fairy, that made it so that, erm, attacks did half as much damage to you. I felt a bit cheated' (Sam: 23). Interestingly, Sam's comment also reveals a level of game literacy which allows him to peel away the fiction to identify the procedural elements to which they are anchored.

from the much loved fairy tale structure of *Ocarina* and all other entries in the series. Moreover, and of the greatest importance here is that while some instances of *Ocarina*'s aesthetics may fail to deliver Maslovian satisfactions, the aesthetics of the game *as a whole* do not. On this point, the message is unequivocal: *Ocarina of Time* enriches the lives of my interviewees.

Conclusion

This chapter has been concerned with Abraham Maslow's theory of higher needs in relation to players of *The Legend of Zelda: Ocarina of Time*. In particular, it has shown how the game may help to satisfy some of these needs for its players. I have argued that higher needs may be met through four broadly defined aesthetic properties of *Ocarina*: Spectacle, Narrative, Form and Play. Here I have presented interviewees' comments on their experiences with *Ocarina* within these aesthetics and discussed their significance in terms of Maslow's (and other relevant) theory.

Specifically, I have argued that the interviewees find beauty and a place for reflection in *Ocarina's* virtual playspace. It is, I argue, a place players sometimes access for its tranquility alone, an occasionally 'peaceful' (Phil: 16), 'calming' (James: 1) and 'serene' (Michelle: 7) environment of setting suns and 'rippling water' (Phil: 16). I have stressed that this 'eager passivity' (Maslow: 1954: 155) of appreciating beauty for its own reward comports with ideas in game studies (Howell, 2002; King and Kryzwinka, 2006) and also in the thinking of Maslow, who believes beauty may be necessary to prevent sickness '…(in special ways) from ugliness' (Maslow, 1954: 25).

I maintain that playing *Ocarina* involves the interviewees at an ethical level, with them becoming deeply involved in the struggle to return Hyrule to a morally sound state. Outrage at the evil done to this once idyllic place inspires a will to action in this '…cause outside of their own skin' (Maslow, 1970: 42). This involvement is highlighted further though the interviewees' love of, and immersion in, *Ocarina*'s myth-like narrative, a story first experienced by the majority when they were children; when the game showed them that if they persevere, 'one masters all obstacles and at the end emerges victorious' (1976: 8). I have noted how ensuring that *Ocarin*a's story makes

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sense also appeals to the interviewees, and that some of them 'rearrange…improve and…correct' it - actions of self-actualising people - to make sure that it does (Maslow in Hoffman, 1996: 44).

I argue that *Ocarina* can sometimes be a very difficult game, particularly the puzzles of its temples, but that this struggle is desired by my interviewees and allows them to experience a sense of intellectual satisfaction, the 'calming effect of understanding' (1954: 173). This is made evident in comments from Sam and Daniel. Sam, for instance, scorns games of little challenge, and dismisses one of the form's earliest examples - *Pong* - for such an offence. Daniel is more specific regarding the process of struggle, describing the 'pain' of extreme challenge, but also the reward. The section of *Ocarina* seen as the most difficult - The Water Temple - is, he says, 'my favourite part of the game for how much it tests you' (Daniel: 9). I have argued that such difficulty, such challenge, creates immersion, flow and a great sense of achievement and self-esteem in the interviewees. I have noted that the interviewees' desire for such challenge resonates with Maslow's Being-values, with self actualisers, 'attracted to the unknown, to the chaotic, unorganized and unexplained' (Maslow, 1954: 24).

I contend that *Ocarina* allows interviewees to not only satisfy their desire to create order - for 'systemizing the universe' (Maslow, 1954: 23)- through the collection of its many items, but that it also provides them with an outlet for playful creativity and expression. I establish that such creativity and expression is characterised by exploration and experimentation. I have argued that interviewees' explore *Ocarina*'s virtual playspace in the way a young child explores its new world, 'rolling around - literally - and just playing with stuff' (Phil: 17). This playful 'stuff' includes a giant hammer which 'went DONG!' (Sam: 22), boots, bows, boomerangs and hookshots; items which '…if you had in real life would be awesome, but you don't' (Dean: 20). I found that the game's ocarinas are the items valued the most, central not only to the game, but also in allowing the interviewees to enjoy purposeless, playful self expression.

In summary, interviewees' comments attest to the notion that the aesthetics of *Ocarina* provide ample opportunities for higher need gratifications to be gained and,

most importantly, that they are. While this argument should be treated with some caution (due to the small sample), there is nevertheless clear evidence here to support it.

<div align="center">**Conclusion**</div>

<div align="center">***The Legend of Zelda* and Abraham Maslow's Theory of Needs Reconsidered**</div>

Introduction

This thesis has not attempted to argue that the computer game is entirely worthy or that future research need *only* concern itself with exploring its potential positives. Instead, it argues that the computer game should not be examined - as it *has* largely been examined in the psychological literature - with only the negative in mind. It has used one particular computer game - *The Legend of Zelda: Ocarina of Time* - and one sample of its players to search for and highlight the benefits that the computer game can bring. The thesis has used a number of theoretical sources, especially the work of Abraham Maslow, to create a conceptual space in which we can view those benefits and come to an understanding of them. Of course, exactly how much enrichment the computer game has brought to the lives of the interviewees in this research cannot be measured. There is strong evidence, however, to suggest that the computer game has played - and continues to play - a role in lubricating and intensifying computer gamers' social relationships; improving their self-esteem; and providing visual pleasures, intellectual stimulation, moral guidance and a liberating sense of playfulness.

<div align="center">**1. The Computer Game**</div>

That something as fresh and novel as the computer game could be enriching to its players should perhaps have been evident to all shortly after its entrance into popular culture. *Space Invaders* (Taito, 1978) - arguably the first computer game to make an impact on popular culture - and the arcade games which immediately appeared in its wake, seemed to delight the younger generation in particular. What they did *not* appear to do, however, was much good. For almost as soon as the first *Space Invaders* started snapping at the heels of the mainstream, the computer game drew disdain from some quarters. A 1981 article from the *Cambridge Evening News*, for example, discusses

concerns raised by the National Union of Public Employees: schoolchildren, said a group of their members ('school dinner ladies'), were spending money on *Space Invaders* rather than on lunch. Tellingly, the article closes with a comment from the local authority's Education Officer, who notes the lack of evidence to support the claim: 'There is no indication that the school meals service is suffering as a result of this machine. The numbers taking meals and the cash flow have not been reduced.'[208] As noted in chapter one, early academic studies too seemed far from enamoured with this new medium and focused largely on discovering negative effects.[209]

As we know, despite such lack of enthusiasm, the computer game did not go away. It instead helped mark the beginning of the new technological age and, like almost everything else with a silicon heart, the computer game has become ever more ubiquitous. With this ubiquity, and the ever expanding and nuanced culture and business of games, it might be expected that the consideration of its players would also become a little more nuanced and balanced. For, as noted in the general introduction to the thesis, surely so many would not spend so much time and money to feel bad. Not according to most accounts. Psychologist Craig Anderson has undertaken several recent studies of the social psychological literature on computer games. From the first, in 2001, he notes:

> These results clearly support the hypothesis that exposure to violent[210] video games poses a public-health threat to children and youths, including college-age individuals. Exposure is positively associated with heightened levels of aggression in young adults and children. (2001: 358)

The state of affairs as regards the focus of the psychological literature and its general conclusions has barely changed in the ten years since Anderson's first review (noted in chapter two). Indeed, in his most recent overview, published in 2010, Anderson's findings are much the same:

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[208] http://www.80sactual.com/2007/05/space-invaders.html

[209] Examples include Dominick, J. R. (1984). 'Videogames, television, violence and aggression in teenagers', *Journal of Communications, 34,* 134-147 and Lin, S., & Lepper, M. R. (1987) 'Correlates of children's usage of video games and computers', *Journal of Applied Social Psychology, 17,* 72-93.

[210] It is worth restating here, that while *Ocarina of Time* is an adventure game, it is also about combat. The first task Link is given is to find a sword and shield and combat is an integral part of the overall experience: it is found in the general traversal of the playspace and as the climatic set piece of every temple.

As expected, VGV [Violent Video game] exposure was positively associated with aggressive behavior, aggressive cognition, and aggressive affect. (Anderson, et al, 2010: 167)

The problems with the studies considered by Anderson are numerous: many rely on self-reporting subjects, until recently none of them were longitudinal (few are still) and almost none are individualistic. All of these concerns are linked to the biggest problem of all, which is one that concerns traditional 'media effects' arguments generally, that of proof: evidence for causal effects is at worst flimsy and at best inconclusive, something that almost always is admitted by the researchers. For instance, a generally thorough 2001 study by psychologist Jeanne Funk, notes that some of their hypotheses remain 'unproven at this time' (2001: 142) and concludes that '…disagreements about the initial direction of causality should be held in abeyance as additional research is completed.'(2001:142). A more recent study by interpersonal psychologists Patrick and Charlotte Markey notes the many causal complexities involved when attempting to reach any sort of conclusion: 'It appears that VVGs [Violent Video Games] only adversely affect some individuals and those who are affected have a preexisting disposition (i.e., high neuroticism, low agreeableness, and low conscientiousness)…' (2010: 90). This point of provability is something stressed by critics of effects theory, such as Media scholar David Gauntlett, who notes that, '… the mass of media 'effects' studies have been unable to show that there is simple imitative link between people's media consumption and their subsequent actions.' (Gauntlet, 2005: 143).

What makes the analysis of game 'effects' even harder, is the difficulty in understanding the computer game itself. Older media such as television and cinema is, ontologically speaking, relatively straightforward, with generally accepted definitions in existence. If the essence of a cultural or media form can be relatively easily understood, then it is reasonable to assume that understanding its associated culture is made less problematic than if it cannot. Fifty years from the earliest computer game, *Spacewar!* (Freeware, 1962), questions of definition are *still* being raised regarding the computer game. Indeed, as recently as 2009, eight years after Computer Game Studies was established as a discipline - and several years since Ludologists and Narratologists (footnoted in chapter two) had seemingly reached some kind of entente cordiale -

computer game scholar Ian Bogost, declared that 'Videogames[211] Are a Mess', and delivered a speech explaining exactly why: because we are still unsure as to exactly what they are. Using Atari's 1982 computer game *E.T* as an example, he provides no less than eleven definitions, including 'a consumer good', 'an experience' and 'a sign that depicts the circumstances surrounding the crash of 1983'.[212]

This is why starting with a sound, inclusive definition, which draws on a decade of computer game scholarship, is important to this work: it is necessary in a piece of research attempting to record and discuss subjects' reactions to or effects from an object to understand what the object is that may be causing any effects. The definition, noted at the end of chapter two, notes the influences on the characterisation of the computer game from other areas, these being the notions of traditional play and games and storytelling. Most importantly, though, the definition includes details of how the computer game is unique: its embodiment of such traditional properties along with those that are distinctly its own, its great processing power, its virtual *playspaces* and its reliance on player input to be whole.

Just as important as understanding the computer game is in using an appropriate theoretical framework through which to try and understand its players. To this end, I have offered the theory of Abraham Maslow, an alternative, social-psychological conception of the self, which acts as a corrective to the literature noted above.

2. Abraham Maslow

Published in 1954, Maslow's *Motivation and Personality*, or rather the arguments contained within it, challenge the prevailing thoughts of the Freudians and the behaviourists. In the book, Maslow suggests that Man is not driven by base instincts or that he can be understood through patterns of his actions but is instead motivated to do

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[211] The issue is inadvertently highlighted in Bogost's title and in the introduction to this thesis: even how to refer to the computer game is not agreed upon – 'computer game', 'video game', 'videogame' or even, as preferred by some in the academy, 'digital game' (Rutter, Jason and Bryce, Jo, 2006; Kerr, Aphra, 2006; Anandra, Mitra, 2010; De Freitas, Sara *et al*, 2011). While this need not necessarily be problematic – film, after all is referred to as both 'film' and as 'movies' – it does illustrate the point.

[212] Source: http://www.bogost.com/writing/videogames_are_a_mess.shtml. The industry 'crash' is, of course, noted in chapter two.

good and has a complex set of desires (or motivations). These desires are, in-keeping with Maslow's core belief, to be good. As noted in the general introduction to the thesis and in chapter one, this positive Maslovian psychology seemed a good place to start when attempting to consider the positive social-psychological effects of computer game play: being a psychological theory, it meets the existing psychological studies head on. Here is a psychological perspective that allows the possibility of player benefits - should they exist - to be understood.

At the project's outset, and discussed in chapter one, only Maslow's theory of *higher* needs was expected to be useful: certainly the idea of emotional and social needs - Maslovian basic needs - being met through engaging with a computer game designed for a single player seemed unlikely. As it transpired, this is not the case, and interview questions initially planned as ice breakers (leading into a concentrated *Zelda* discussion) proved extremely fruitful in identifying potential basic need satisfactions, with all categories bar the physiological needs proving to have some relevance. However, while Maslow's work on physiological needs did not prove useful in this case, it may well be relevant in both the immediate and long term future. For instance, computer games requiring physical input beyond button presses have been becoming ever more popular over the past few years (dance-mat based games have been sporadically produced since the late 1990s[213]), a popularity accelerated by the arrival of Nintendo's *Wii* console and a large number of games for it which require significant physical movement (or *non-trivial physical effort*, to slightly reword Espen Aarseth's phrase) to play.

Use of Maslow's work on higher needs has been found to be extremely useful. There were, however, obstacles that needed to be overcome. One difficulty in considering the interview data in regard to the higher needs - and, to an extent, in using Maslow's thinking in general - is its lack of definitiveness. Such indeterminateness stems from its constant evolution: the development of the higher needs and its associated concepts (such as self-actualisation and the peak and plateau experience) was, in effect, Maslow's life's work. A theory first conceived - albeit in highly

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[213] The first of Konami's *Dance Dance Revolution* games, arguably the most well known series of dance games was released in Japan in 1998. There have been numerous instalments released in both Japan and in the West, since.

embryonic form - in the 1940s was still being refined at the time of Maslow's death, in 1970. While an interesting problem to be faced with, it made it difficult to know what the final version of a particular portion of the theory was, if there was one at all. Eventually it became apparent that this was not something to be too concerned about and that all of the developments and evolutions of his theory, Maslow intended as a stimulus for further investigation. The methodology here then, was to be guided by what passed for first principles in such a fluid and ever evolving body of work: the fourteen B-Values (appendix 1) are a cornerstone - for in essence, these do not change - and these are supplemented with a consideration of any further unpacking of them that Maslow presented. That said, some of his categories do need specific development for use in computer game research. These areas are those regarding the aesthetic need (or the need for beauty) and the cognitive need. As is apparent from chapter five, these are key topics covered by the interviewees, and in that chapter are re-categorised as Spectacle, Narrative, Play and Form and Completion, with the final category being sub-categorised further still. These concepts and this methodology, then, should form the basis for future appraisals and criticism because they represent the ways that games get incorporated into player experience and take on significance for them.

Finally, there are the generally accepted limitations of Maslow's theory to address. These - discussed in chapter one - concern the theory's individualistic nature and its lack of empiricism. As noted in chapter three, however, this thesis operationalised Maslow's concepts, allowing them to be used *sociologically* in conjunction with interview data from real computer game players. This sociological approach allowed me to situate play with computer games within its wider social contexts.

3. Findings

By the time the interviewees were taking their first steps in the world of digital play, computer games had entered the home en masse. Computer games - and its host technology - had, in fact, become *domesticated.*

Of course, the research has found some dissatisfactions and negative reactions to playing these domesticated computer games. There is some dissatisfaction with *Zelda*, and specifically *Ocarina* itself. However, the majority of these, concerned as they are with shortcomings of the game, actually serve to underline the higher level pleasures the interviewees have come to expect from computer game play. They speak of occasional unfairness in challenge, of the occasional lack of challenge, or instances where a game mechanic - such as the menu system or lack of visible luggage - threatens to break their sense of immersion.

Perhaps most important in terms of negative findings, then, are the consequences of computer game play beyond the specifics of *Ocarina*. In regards to these, there *is* the suggestion of addiction, an ever present thread of the predominant psychological research. This suggestion is in Lee's talk of playing into the night, for instance, and Sam's example of three-day gaming sessions. Sam's invented game of 'Smoke Along With Snake' also reveals an instance of a computer game influencing real world behaviour in a way which can be interpreted as harmful. That said, though, how much the creation of 'Smoke Along With Snake' is attributable to direct influence from *Metal Gear Sold 4* is debatable, as argued by David Gauntlett, and underlined in his comment above. Games are definitely, however, the direct cause of friction or unhappiness at times, either within the home or in the wider world: Lesley voices her annoyance at parental help (and her venting of this annoyance at her father), Dean laments his parents' decision to buy him a console, there are schoolboy arguments over the attributes of different game consoles and arguments over mastery of titles. Finally, pride in game playing prowess may be regarded as an unpleasant personal trait which would not exist were it not for the presence of computer games. [214]

While some of these concerns are significant, and should not be dismissed lightly, with respect to the sample used in this research, they are heavily outweighed by the positive reactions. The study has shown some of the dynamics of how the computer game medium has been incorporated into peoples' lives and the meanings this has for

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[214] As noted in chapter four, however , this pride - sometimes manifested through what interviewees termed 'Bragging Rights' - is often group pride, or *shared* gaming capital, so should not always be perceived in negative terms.

them. The interviewee testimony details how the computer game has become embedded in the fabric of family space: in living rooms, studies and bedrooms. It illustrates how the computer game has become part of family *time*: evening, weekends and holidays. It details how the computer game becomes part of bedtimes, reward systems and rituals: central to parent child bonding and shared sibling and peer activity. In short, the interview narratives illustrate how the computer game has become an important part of *shared* activities with families and friends. The computer game was, and remains, a faithful companion to the interviewees. It was there with them almost at the start of their lives as they sat on fathers' knees and as digital frogs taught them numeracy. It was there with them as they grew and played with brothers and sisters, after bedtime, under bedclothes and long into the night. It has stayed with them as they have grown older, comforting and uniting them: the hearth of the home and a signifier of the home from home. This focus for shared activity - this entrainment discussed in chapter four - brings Maslovian feelings of belonging, love and esteem.

Interviewees' early play with games led them to the *Legend of Zelda* series and *Ocarina of Time*. In this game, commentators seem to agree, the computer game reached something of an apex. As noted in chapter two, *Edge* magazine called it gaming's '*Citizen Kane* moment' (2007: 222): a game representing the peak of artistic achievement for the form. This game was chosen partly because of such standing, but it was also chosen for other reasons. Firstly, it is a highly 'gamic' game, containing everything a computer game - as discussed in chapter two - needs to be called one. Also, despite its relative maturity, it contains contemporary tropes and remains highly popular - evidenced by its successful re-release in 2011. Secondly, *Ocarina* contains a significant level of combat, (to succeed the player must use several swords, a catapult and a bow) an element of violence necessary so not to be accused of selecting a game devoid of one of the significant elements that previous research has linked to negative effects. Finally, it was chosen because of its large number of fans: a seemingly large and diverse population from which to sample.

For the most part, the interviewees find delight within *Ocarina*'s world. They find it physically beautiful and sometimes play it for the sole purpose of soaking up such beauty. Interviewees gravitate towards its vast expanses and its intimate corners:

they race towards the setting sun or watch it in quiet contemplation at the secluded fishing lake; they roll through the grass of Hyrule Field, or - through the kinesthetic vibration of the controller's feedback - feel its firmness through the hooves of the game's horse, Epona. That such pleasure is gained from *Ocarina*'s environment underlines the importance of *playspace* to computer games' definition. It also underlines the importance of the cognitive playthrough. Only through this, could an intimate knowledge and understanding of *Ocarina*'s aesthetic properties be gained and a thorough understanding and analysis of interviewee comments performed.

In addition to the physical beauty, most interviewees also prize *Ocarina*'s narrative: a folk tale story of good versus evil, a mythically resonant tale of the oddly named hero, Link[215], in a quest to save a fairy tale princess, Zelda, from the clutches of the terrible villain, Ganon. The interviewees want to save the princess and her kingdom. While, of course, this is because successful progress and completion of the game is impossible without doing so, it is also, for some, because they feel compelled by a moral imperative. Indeed, for one interviewee, this sense of moral duty extends beyond the world of the game:

> *Zelda* has had a very large impression on me, some of which I don't even realise. Small things like opening the door for the person behind me. I do things like that as second nature, but I've noticed in the recesses of my mind I'm always thinking 'What would Link do?' I know, I know, it sounds crazy, but it's the truth. And it's made me a better person overall because of it. (James: 1)

Many of the interviewees discovered this game when they were children, when the world of magic, animism and morality was vivid and familiar for the child au fait with fairy tales in their more traditional form. The thesis notes child psychologist Bruno Bettelheim's (1976) take on the fairy tale's appeal to children and suggests that this interactive, digital version played a similar role for the interviewees when they were young: it taught them that seemingly insurmountable and frightening obstacles can be

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[215] The series' current creative director, Eiji Aonuma, has stated the relevance of Link's name in numerous interviews, including this one from the computer game website, *1Up*:

> When a player is playing a Zelda game, my desire is for the player to truly become Link -- that's why we named him Link, so the player is linked to the game and to the experience. http://www.1up.com/do/feature?pager.offset=1&cId=3163610

overcome. This game has apparently been such a powerful teacher that the interviewees return to it again and again to remind themselves of such a reassuring lesson.

The interviewees are intellectually stimulated by the game. This is sometimes gained through interaction with the story: being a computer game story, it is never complete unless it is being played. It is also incomplete in the more commonly understood sense, with *Ocarina*'s narrative coherence breaking down in the end. 'Does Link remain an eternal child?' ask the interviewees, 'Or does he become an adult'? The discussion of such matters teases and challenges them. The interviewees also gain intellectual satisfaction through more obvious challenges: the abstract puzzles found in the game's dungeons. They feel a sense of achievement and fulfillment after completing such trials. That the Water Temple features so prominently in interview narratives is perhaps appropriate, as the interviewees' intense interaction with the game engenders a sense of immersion - a metaphor associated with being enveloped in water. For the interviewees, *Ocarina*'s challenges are real and Link's quest to save Hyrule becomes their own.

Finally, the interviewees like to indulge in creative, purposeless *play* with this game*:* they like to hit things with giant hammers, to fly with the aid of cuckoos, to fire flaming arrows at unnecessary targets and to swim for no good reason at all. The play they enjoy the most through, is that based around either of the game's two ocarinas. The interviewees express themselves by playing songs they know well and songs they do not, playing to themselves, their partners and even to their pets. For the interviewees, *Ocarina* is *Ocarina of Time and* an ocarina, a cherished game and a cherished toy. Such free, experimental play brings them back to the Piagetian bangable, suckable joys of early childhood and forward to the Maslovian world of Being values.

Computer game technology being used in such a way - thoughtful, positive, inclusive, creative and playful - not only contrasts with views expressed by the mainstream press and the prevailing academic literature, but also against Mia Consalvo's (2007) notion of individual, or exclusive, gaming capital and the wider criticism posited by the critical theorists. Such criticisms - specifically those made by Albert Borgmann (1987), Neil Postman (1985; 1992) - are recorded in the thesis, but the way this entertainment media is used and accessed also runs contrary to ideas expressed

by others who are not recorded here. This includes perhaps the most well known member of the Frankfurt School, Theodor Adorno (2002). The computer game with its standardised genres, tropes and yearly updates could easily be compared to the pop song of which he says, 'The details themselves are standardized no less than the form' (Adorno, 2002: 438) bringing a 'relaxation which does not involve the effort of concentration at all' (2002: 458). The game players interviewed for this thesis, however, are no 'cultural dupes' mindlessly consuming this relatively new popular media (Jenkins, 1992: 23), but instead quite the opposite, using the computer game in a manner more resonant of that discovered by more recent cultural theorists such as Roger Silverstone (1994), Sean Moores (2000) and Henry Jenkins (1992, 2006, 2008), theorists who base their findings on empirical research.

From the findings of the data, then, it is absolutely possible to state that although *some* players may have *some* negative responses to *some* aspects of computer games, the computer game allows for *many* social-psychological benefits to be realised. These benefits are gained through either the domestication of its host technology (and its cementing and lubrication of the associated social ties), or from the computer game itself (from its numerous interactive and aesthetic properties). The computer game as an amalgam of rules, fiction and virtual *playspace* which demands intense playfulness, or interaction allows for it to have such benefits. In terms of its domestication, the playful interaction exists between players and games and players themselves: children and parents, siblings and friends. In terms of computer games themselves, the playful interaction exists between players and games, allowing for intense immersion in their aesthetic properties. Through this immersion, there is the possibility for basic and higher need satisfactions to be gained.

Such a study is not, of course, definitive. While perhaps no study could claim to be so, here the lack of definitiveness is largely due to both the use of a single focus game and the relatively small size of the interview sample. A larger and more longitudinal study using the same methods will be able to further explore the notions of basic and higher needs, self-actualisation and the peak and plateau experiences.

4. Contributions of the Research

There are several achievements of this research beyond the specific boundaries of the thesis itself. To begin with, it proves the value of using Maslow's theories as a basis - but not a rigid operationalised tool - for research on the computer game player: it is a theory which can speak to other psychological studies on their own terms while also allowing for flexibility and exploration in discussion and analysis of data. In short, Maslow's theory offers untapped potential for the study of computer game play today.

The work builds upon the Internet based methods of collecting qualitative data pioneered by the likes of Christine Hine (2005), Chris Mann and Fiona Stewart (2000) and in doing so contributes to the literature in this area. In particular, the research underlines the feasibility and usefulness of targeting specific web sites to quickly reach a target audience, or specific social group. It also demonstrates how ethical considerations regarding such a method can be efficiently managed: from approaching gatekeepers, to arranging interviews, to administrating, signing and collecting informed consent forms. Moreover, it also highlights the usefulness of mixing such new methods with traditional ones and provides a model for how this may be most successfully achieved.

The thesis shows the worth of using qualitative methods, particularly semi-structured interviews, in researching the computer game audience, producing vastly different results than quantitative methods. The computer game is a complex form and, as such, generates complex responses which cannot be easily quantified. As noted in the methodology, engaging in a dialogue with its audience is the first step in understanding it. This is especially relevant in the consideration of further psychological research into the computer game, a still limited field and a body of knowledge which this research has now contributed towards.

The thesis provides a working cognitive playthrough method for the computer game and highlights the worth of using such a method in Computer Game Studies. This introduces the possibility of using the same playthrough, or other forms - modifications to the original design as appropriate for pieces under consideration - for further research into procedural, and other, aspects of computer game play.

In terms of social theory, the work demonstrates that technology is not always sinister or divisive, as argued by the likes of Albert Borgmann (1987)and Neil Postman (1985; 1992), but that it can be just the opposite: binding and nurturing to personal and social relations. It has contributed, then, not only to the literature on the domestication of technology but also to the field of social theory inhabited by computer game scholars who consider the computer game beyond its use as entertainment. These scholars include James Paul Gee (2008), discussed in chapter four, who examines the computer game's use as a learning tool and others involved in the Games in Education[216] or 'Serious Game'[217] movement.

The work also enriches the field of Computer Game Studies itself, by introducing a psychologist - Abraham Maslow - not yet considered and by opening up the avenues of motivation and self-actualisation for further exploration. Finally, and most importantly, the thesis contributes to our understanding of both computer games and their players. It demonstrates that computer games are rich aesthetic artifacts, capable of enriching the lives of those who play them on the deepest of levels. It demonstrates that computer gamers do not always play for simple sensory thrills but to meet important, innate, human needs.

The computer game has always caused controversy, from tabloid scare-stories painting it as the enfant terrible of popular culture (usually because of the perceived violent or sexual nature of its content) to similarly negative treatment and publication bias in the psychological literature, to their general demonisation by right wing pressure groups and politicians[218], all of which resonates with wider social and effects theory.

The story of the computer game is also one which has been characterised by great change, reflected in the technology powering the games and, resultantly, in the game content itself. The first *Zelda* game for instance, released in 1986, may, as noted in

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[216] http://gamesineducation.org/

[217] http://www.seriousgamesinstitute.co.uk/

[218] Perhaps the most sustained example of such reaction is that of American attorney Jack Thompson, who has campaigned against the computer game industry for several years, most recently in March 2011 in relation to a fan modified version of Valve's *Half-Life*. His position against computer games and their industry is perhaps best exemplified by his comment on the release of Rockstar games' *Grand Theft Auto IV*, calling it, '…the gravest assault upon children in this country since polio' (http://n4g.com/news/141183/do-violent-games-like-gta-create-violent-kids).

chapter two, be original and influential but is also now something of a relic, a reminder of just how far the computer game has come: from *The Legend of Zelda* to *The Legend of Zelda: Skyward Sword*, from 1986 to 2012 and beyond. In such time, and amidst such changes, the computer game has gone from hobbyist novelty to global entertainment. On the whole, however, the core aspects of the computer game remain the same: a mix of rules, fiction and virtual playspace brought to life by the player. The same can be said for the player experience: it is one of playful interaction, with them still procedurally removing one obstacle to progress after another.

In part, however, there are differences in these areas. The rise of casual games and casual gaming means that, for some, computer games are not always consumed in the way they once were, the way they initially were, for instance, by the subjects of this study: for long periods at dedicated times and in dedicated places. For such a reason, this research should be seen as the beginning of work on the prosocial capacities of the computer game medium, research which focusses on one important moment or aspect of it. The theory and methodology has paved the way for future investigations into other areas which have opened up in recent years, such as, for instance, casual games and casual gamers.

Finally, there is only the following to note: this research makes it legitimate to consider how many computer game players concern themselves not with achievement points, level progress or high scores, but with more fundamental matters regarding their happiness and personal growth. The research makes it valid to consider how many players, when faced with a moral choice, ask themselves questions such as the one the interviewee, James, asks himself in such circumstances: 'What would Link do?'

Perhaps he would play a computer game.

Appendix 1: Maslow's list of Being Values (reproduced verbatim)

1. wholeness; (unity; integration; tendency to one-ness; inter-connectedness; simplicity; organisation; structure; dichotomy-transcendence; order);
2. perfection; (necessity; just-right-ness; just-so-ness; inevitability; suitability; justice; completeness; 'oughtness')
3. completion; (ending; finality; justice; 'it's finished'; fulfilment, *finis*, and *telos*; destiny; fate);
4. justice; (fairness; orderliness; lawfulness; 'oughtness');
5. aliveness; (process; non-deadness; spontaneity; self regulation; full-functioning);
6. richness; (differentiation, complexity; intricacy);
7. simplicity; (honesty; nakedness; essentiality; abstract; essential; skeletal structure);
8. beauty; (rightness; form; aliveness; simplicity; richness; wholeness; perfection; completion; uniqueness; honesty);
9. goodness; (rightness; desirability; oughtness; justice; benevolence; honesty);
10. uniqueness; (idiosyncrasy; individuality; non-comparability; novelty);
11. effortlessness; (ease; lack of strain, striving or difficulty; grace; perfect, beautiful functioning);
12. playfulness; (fun; joy; amusement; gaiety; humor; exuberance; effortlessness)
13. truth; honesty; reality; (nakedness; simplicity; richness; oughtness; beauty; pure, clean and unadulterated; completeness; essentiality)
14. self-sufficiency; (autonomy; independence; not-needing-other-than-itself-in-order-to-be-itself; self determining; environment-transcendence; separateness; living by its own laws).

(Maslow, 1962: 93-94)

Appendix 2: Initial emails and Forum Posts

Sample email to Webmaster

Dear _____

I'm a PhD student at The University of Manchester researching computer games and their players. My thesis has the provisional title of Maslow's Theory of Needs and the Social Psychology of Computer Gaming. Its aim is to determine the pleasures, or benefits, gained from the playing of computer games, with a particular focus on The Legend of Zelda: Ocarina of Time.

With your site seeming to be one of the largest and most popular Legend of Zelda fan site on the web, I was hoping to use it as a resource. There are two things I would like to do.

The first of these is to interview some of your members. My approach would be to post an initial request for respondents in your forum area, along with my email details. Interested members would then email me to register their interest. Those that seem most suitable for interview will then be emailed back and the process of arranging interviews - to be carried out either electronically (via email) or in person - can begin.

The second thing I would like to do is to use your forum as a documentary source.[219] By this, I mean I would like to look through the posts to see what your members are talking about. By doing so, I would hope to be able to form categories of 'benefits' or 'pleasures' that members ascribe to their involvement with the game and use the findings in my thesis.

As this is your site, I would very much like your permission to go ahead with this, and look forward to receiving your response.

Best wishes,

Paul Brown

Forum Post

'Hi, I'm a PhD student based at the University of Manchester. I'm looking to interview 'hardcore' players of RPGs and Action Adventure Games, and in particular of *The Legend of Zelda* series (and even *more* in particular, players of Ocarina of Time!). I'm looking to interview via email and (with those that are based in North East England) face to face. If you're interested in being involved in this project and would like more details, please get in touch at brownpaul5@sky.com Many Thanks, Paul Brown'

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[219] This additional method was decided against very early on in the process.

Email to Interested Parties contacted via Zelda Websites

I'm a PhD student at The University of Manchester researching computer games and their players. My thesis has the provisional title of Maslow's theory of needs and the Social Psychology of Computer Gaming. Its aim is to determine the pleasures, or benefits, gained from the playing of computer games, with a particular focus on The Legend of Zelda: Ocarina of Time and its audience.

I'm interested in interviewing fans of Ocarina of Time, especially those that consider themselves 'hardcore', having played through the game on more than one occasion.

The interviews will be conducted either electronically or - if interviewees live in North East England and are willing – in person.

If you are between the ages of 18-34 and are still interested, please email me at: brownpaul5@sky.com

Email to Interested Parties contacted via *CGZ*

There are three options as to where we do the interview. The first is to interview you at your home. Research has shown that this is the best place for such interviews *but* I completely understand that at the minute, I'm just a guy off the Internet and you might not therefore be comfortable about this. The other options involve using a 'third place' to use PS2 ad speak! The 'third places' that spring to mind, are: 1 - The *CGZ* 'chill out' room. I spoke to one of the managers around December time about this and he said it would be fine. 2 - A quiet pub/ cafe etc. (perhaps a room in the Central library?) in Newcastle town centre. 3 - Anywhere else that you think might be appropriate. As to when we do it, when would be convenient for you?

Calling all Zelda Fans!

Are you a keen Legend of Zelda player?
Do you particularly like Ocarina of Time?
If the answer to the above questions is
'yes' *and* if you're aged between 18-34
and interested in being interviewed as part
of a PhD project, then please contact Paul
at paul.brown@postgrad.manchester.ac.uk
for more details.

Appendix 4: Informed Consent Form

Informed Consent

My name is Paul Brown. I am doing research on a project provisionally entitled Maslow's theory of needs and the Social Psychology of computer Gaming. Its aim is to determine the pleasures, or benefits, gained from the playing of computer games, with a particular focus on The Legend of Zelda: Ocarina of Time. The project is a PhD thesis due to be submitted to The University of Manchester in the summer of 2011.

My address is as follows, should you have any questions:

12 Ford Place,
Stockton on Tees,
Cleveland,
TS18 2RX

(01642678433)
p.brown@bigfoot.com

Thank you for agreeing to take part in the project. Before we start I would like to emphasise that:

- Your participation is entirely voluntary
- You are free to refuse to answer any question
- You are free to withdraw at any time

The interview will be kept strictly confidential and will only be available to myself and appropriate members of university staff. Excerpts from the interview may be made part of the finished thesis, but under no circumstances will your name or any identifying characteristics be included. Interview material will be stored safely and in accordance with the Data Protection Act of 1998.

Please sign this form to show that you have read and understood its content.

-- (Signed)

-- (Printed)

------------------- Date

Appendix 5: Schematic Table of Interviewees

Interviewee Name and Gender	Age, Location and Occupation	First Memory of Computer Game Technology	Self Identifiers/ Distinctive Viewpoints	Position Games Currently Occupy in Life
Alan (M)	23 Student North East England.	As a very young child (no actual age given), playing games, sitting on his father's knee.	Sees himself as a dedicated/hardcore game player ('I'm…a gaming masochist' Alan: 6); cites comments from flat-mates and his playing of the hardcore game *Ancient Domains of Mystery* to support this.	Plays games every day, and shares a house with other hardcore gamers. Gaming is a constant in his life.
Andrew (M)	19 Student North East England.	At the house of a friend as a child: 'All I did was, like, watch him play *Castlevania 4* and lose' (Andrew: 1).	His talk is peppered with pop culture references (Andrew read and drew comics as well as played games). He refers to himself as a gamer.	Discusses various games he is currently playing, has played recently and is looking forward to playing. Gaming is a constant in life.
Colin (M)	19 Student North East England.	Introduced to games through parents. Parents who also chose his earliest games.	Refers to himself as a gamer and is certain that he will be playing games for the rest of his life: '…even when I'm old and lying in bed' (Colin: 2).	A journalism student and has turned several assignments towards games. Refers to many current and forthcoming games he is eager to play.
Daniel (M)	19 Student North East England.	Although not old enough to have experienced first wave of UK	Refers to himself as a gamer and reflects on the views of others: 'whereas some people, I think,	Still playing games avidly – 'I play… like, pretty much every day. It's always been a big part of my life' (Daniel: 1). He

		computers, was introduced to games via his father's *ZX Spectrum*.	when they get to a certain period of life are like, 'Oh no I don't play games - I like football and cars.' I'm not afraid to say I'm a gamer.Whether people think I'm sad, that's their call' (Daniel: 2).	sees spending money on games as an investment and sees a professional future in the games industry: 'My long term aims is possibly to get into games development'(Daniel: 1).
Dean (M)	19 Student North East England.	Educational games on the PC, played with parental supervision. Quite unusual amongst interviewees in that his parents refused to get him any console (later, they allowed him a *Gameboy*. This was a time when handheld devices were perceived as children's toys, rather than proper game consoles).	Refers to himself as a hardcore gamer, and shares a house - with interviewee Lesley - filled with pop culture artifacts including life sized manga figure. Agrees with Lesley that their house is '…a geek's paradise' (Lesley: 27).	Still avidly plays mainly Nintendo games, and is building a retro (*Gameboy*) collection from car-boot sales.
Dom (M)	27 Oslo,	Watching (and hearing) his	Sees himself as a musician foremost,	While his interest in games remains, he

	Student	young parents play *Super Mario Brothers* from the stairs.	but games have always been an important hobby to him.	now only plays - mainly RPGs - when time allows. He named his cat after *Ocarina*'s guide character, 'Navi'.
James (M)	18 Mississippi (US) Waiter	At home, playing a second hand copy of *Doctor Mario* on the *NES*.	Refers to himself as a gamer and plays whenever time allows:' I try to play a good bit, maybe more than I should really. It's just that I find video games to be very relaxing' (James: 1)	Plays games for around two hours a day. Strong beliefs about their psychological benefits: 'I consider gaming a very significant part of my life. If it wasn't for gaming, there's no telling how crazy I might be by now, heh. I use gaming as a serious stress aide, not just a time killer' (James: 1).
Lee (M)	19 Student North East England.	In the family home: 'one of those learning games you get on the PC when you're about five or something' (Lee: 1)	Has little time for mainstream gaming generally (*PS3* and *Xbox*) but has strong feelings about the quality and originality Nintendo: 'They don't care about sort of risking a load of money to sort of advance gaming as a whole. They're the ones that are sort of pushing forwards into new territory' (Lee: 14)	Spends heavily on games and games technology: '90% of my money is spent on games or my computer'. About to start games programming course at University' '...so I'm really committed to games and programming them ' (Lee: 1)
Lesley (F)	19 Student North East	In the family home – learning	Her talk is littered with pop culture references - in	Still heavily invested in games, but has recently had to limit

	England.	game.	particular computer game, Anime and Manga. She notes that between her and partner, interviewee Dean, they have every game console: 'if we split up I get everything' (Lesley: 27).	time due to forthcoming final exams: 'I would like to spend about at least ten hours a week on games if I could get away with it' (Lesley: 2).
Michelle (F)	24 Ohio (US) Radio Presenter	In the family home playing games on the on the *Intellivision* console	Highlights her position at *Zelda Universe* several times and refers to herself as a respected member of the *Zelda Universe* community (she is a moderator there and producer of the podcast) Michelle is loyal to Nintendo 'I don't own any non-Nintendo game systems' (Michelle:1)	Remains a heavy game player 'Some days I'll curl up and play animal crossing or *Zelda* for hours at a time, other days, my boyfriend and I will face-off in a game of *Mario Party* or team up for *Zelda: Four Swords*' (Michelle:1).
Mike (M)	19 Alberta (Canada) Student	In the family home: 'Our family owned a *Nintendo Entertainment System* which I would play with my dad until I was able to	'Just a semi or partially regular nineteen year old guy' (Mike: 1).Defines himself as a gamer and is seen as such by friends 'Many of them will often avoid a game	Still plays games regularly 'I play between one and two hours daily. There are however times that occur where I will build anticipation for an upcoming game and my schedule will manipulate to

		continue on my own' (Mike: 1).	related topic as I can ramble on for hours about my favorite titles' (Mike: 1).	accommodate this' (Mike: 1).
Phil (M)	33 Employee at a North East England publishing house.	In the family home when father brought home an *Atari 800XL* computer system.	Lists games, music and films as his three hobbies, with gaming as the most important of them. Sometimes gorges on games and systems: 'I got a *PlayStation 2* and an *Xbox* on the same day'(Phil: 4)	Still a regular player of single player RPGs and multiplayer games - such as *Guitar Hero*- with his wife.
Sam (M)	19 Student North East England.	Family home. His first memory is of watching his mother play *Zelda: a Link to the Past*.	Refers to himself as a gamer and discussed the bragging of gaming prowess at school. Much of Sam's social activity revolves around games.	Remains a regular player, and often plays even single player games with friends. He makes special social occasions out of new releases.
Tim (M)	18 Perth (Australia) Student	At his father's home (his parents were separated and Tim's mother did not allow him to own a games console of his own. The only interviewee other than Dean for whom this was the case.	Calls himself a hardcore gamer who now has little time to play games. Notes, though, that 'I used to play [games] nearly constantly' (Tim: 1).	Work and study commitments have impacted on time able to be spent on games but, 'I still enjoy going to a local LAN centre/Internet cafe with friends and playing every week or so, though.' Also, 'I plan to base my career around producing video games' (Tim: 1).

Appendix 6: CMC Interview Questions with Commentary (First Phase)

Second phase questions were dependent on answers given to the first phase ones, and differed for each interviewee. As noted in the body text of the methodology chapter, the Face to Face interviews also followed this basic structure.

The font type and size has been reproduced.

Please write as much as you like for each response.

1. If we can just start with a little background. I'm after the usual information here: name, age, occupation where you live etc.

This question is mainly an ice-breaker, and partly as a way to gather basic (or 'the usual') information, I am also looking to see if there are any similarities between gamers' life circumstances. It may be, for instance, that all those interviewed live in urban areas, and this may have a bearing on their desire to spend time in the pastoral one of *Zelda*.

2. Can you tell me a little bit about your relationship with computer games – how long have you been playing them, how often you play them and for how long etc.? You might also want to think about when you play them and any other routines you build around them.

This question is designed to determine the importance of games in the interviewees' lives: how much a part of everyday life they are. From this, it may be possible to make inferences regarding games' significance to the players.

3. Do you consider games a significant part of your life or not?

This is a something of a check question for (2)

4. Can you tell me a about your relationship with the *Zelda* franchise – at what age did you discover the game and which particular game was it, what impression did it have on you and so on?

This question is again similar to (2), now specifically focusing on the importance of the *Zelda* series in respondents' lives.

5. Okay, I'd now like to start talking about *Ocarina of Time* in particular.

   - Can you talk me through your early relationship with this particular game – when and how did you first discover it, at what age and what were your first impressions of it?

   - When you start a new game, how do you name your file? Do you, for instance, use you own name or another. Can you explain reasons for your choice?

   - I think we've established from our earlier, initial contact that you've played this game more than once. Here, I'd like you to tell me, if you can, how many times you've played the game and what it is about the game that makes you return to it.

   - When you play the game, are you able to concentrate fully?

   - Do you have a favourite part or favourite *parts* of the game? If you do, please tell me what/where they are and, if you can, please explain what it is that makes them so popular with you. Similarly, if you don't have favourite sections, are you able to tell me why this is the case?

I'd now like to start focussing in more on certain particular aspects of the game.

   - Do you have a favourite part of the overworld? If you have, I'd very much like your thoughts on it – can you say what you like about it so much? You might like to think about the feelings you experience when playing through this section or the particular actions you indulge or anything else that comes to mind?

   - Do you have a favourite dungeon? Again, if you have, I'd very much like your thoughts and feelings on it. Can you say why you like it so much?

- What are your thoughts on *Ocarina*'s story? I'd like you to think about the part it plays in your playing experience.

- Can you describe how you feel on 'completion'? By completion I don't necessarily mean the whole game. I mean it to refer to completion of a dungeon, a particular segment of the game *or* the game as a whole.

This is clearly an attempt to open up further avenues for discussion, led by interviewees' memories and thoughts on *Ocarina* and the *Zelda* series generally.

Appendix 7: The Cognitive Playthrough

The writing is extremely crude and unprocessed - the thought process, for example, is obviously more complex and conceptual than recorded here - but the excerpt will at least provide an insight into how this strand of the methodology was completed. These are notes on a single room but the piece has been broken into fairly arbitrary paragraphs for ease of reading. Finally, the following map, from *Zelda Shrine* (http://zs.ffshrine.org/ocarina-of-time/maps.php,) may help to contextualise this excerpt a little.
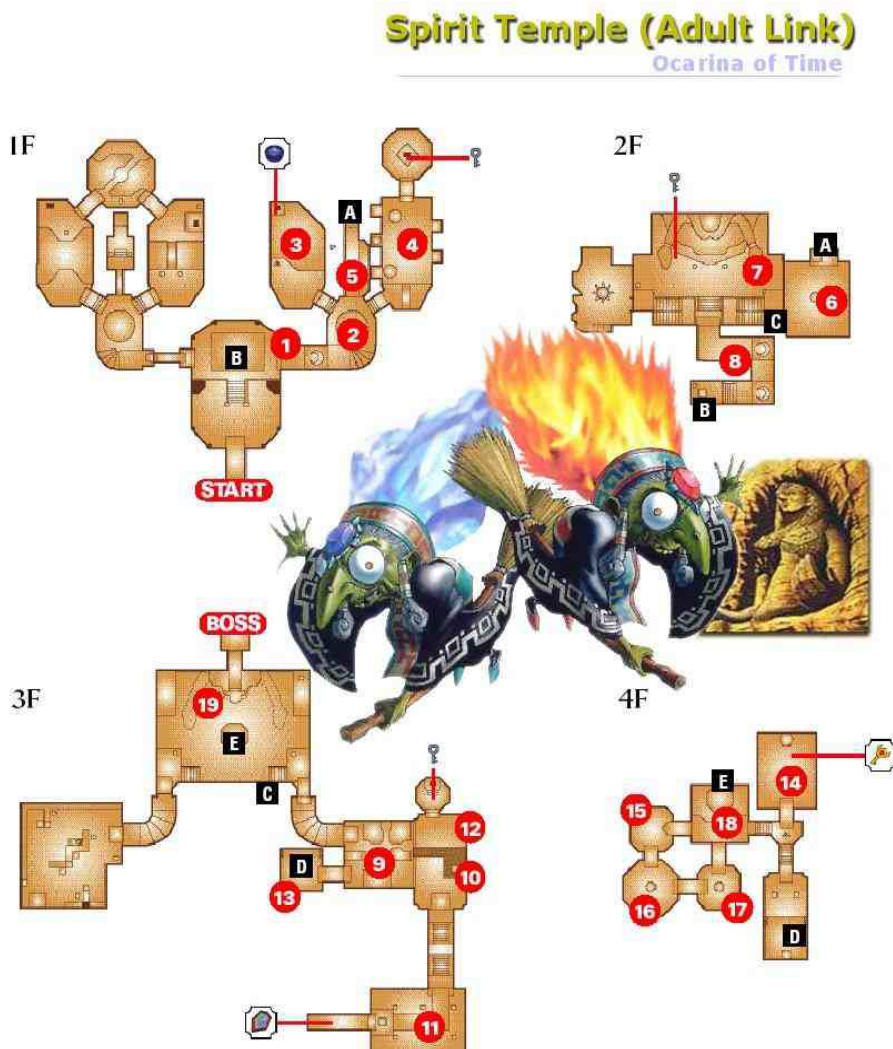
Room 4F14

On entering, I can see that room is quite large and contains four enemies, Torch Slugs. THOUGHT: Have I seen them before? THOUGHT: I seem to remember them from the Fire Temple. THOUGHT: I know how to defeat them. I can also see several doors on the other side of the room. At the far end, there is a broad column of fire and something pale and translucent, of equal width above it. THOUGHT: What now? RESPONSE: move forward to get a better view of the room. ACTION: Move analogue stick forward. As soon as I do so, a Torch Slug moves towards me. THOUGHT: Must change plan and deal with these first. THOUGHT: How? THOUGHT: With Z targeting and sword. ACTION: Press Z to target nearest creature. ACTION: push analogue stick forward while (ACTION) pressing A to 'jump attack'. CONSEQUENCE: the Torch Slug is attacked. THOUGHT: What now? RESPONSE: Repeat procedure on all four Torch Slugs. THOUGHT: Have a proper look around now all is tranquil! ACTION: Use analogue stick to move Link into the middle of the room for best vantage point. ACTION: Press C to access camera. ACTION: Use analogue stick to examine room. I notice that there are six doors in total. Above me, there is a hookshot target and just in front of that, the translucent object I noticed, is now clear as a block of ice. Beneath that, and amidst the column of fire, is a large chest. I know from its design - highly decorated - that inside will be the Boss Key (Behavioural Memory of Objects). I feel excited.

THOUGHT: What next? THOUGHT: I could try the hookshot target but can see that it doesn't align to the block of ice so unless I've overlooked something, it won't work. THOUGHT: What other options are there? RESPONSE: Open the doors. THOUGHT: I recognise these doors from The Fire Temple (Behavioural Memory of Objects). THOUGHT: That time they were booby-trapped. Only one was real. THOUGHT: It's even more likely to be the case in the Spirit Temple where other items have been possessed. THOUGHT: The answer must lie with them. THOUGHT Perhaps one of them is real and will lead to a fire extinguisher or some such item? THOUGHT: Interact with one carefully to make sure THOUGHT: Which one? THOUGHT: The nearest one to my left, just in front of the fire engulfed -chest. ACTION: Move towards door. ACTION: Press B to attack with sword. ACTION: move away from door. CONSEQUENCE: The door is indeed fake. It snaps back and forth as if made of rubber. I narrowly avoid being hit. THOUGHT: I'll try all doors. THOUGHT: Which order? RESPONSE: As before, clockwise for neatness sake. ACTION: As above for door to the left of the chest. CONSEQUENCE: An Eye-switch is revealed. THOUGHT: what now? RESPONSE: shoot it. This is again down to familiarity with the Eye-switches from the very first dungeon onwards (Behavioural Memory of Objects). THOUGHT: I also feel that this must somehow bring the solution to the puzzle even though I don't know what it is. THOUGHT: how do I do this? The door has bounced back. THOUGHT: Destroy the door. THOUGHT: How THOUGHT: With bombs. Again could use Bombchus but Bombs are chosen for their greater controllability. ACTION: press C to select and prepare bomb. ACTION: move Link towards the door. ACTION: Press C to drop bomb. ACTION: Move quickly out of the blast radius. CONSEQUENCE: the door is destroyed and the Eye-switch visible.

THOUGHT: What now? RESPONSE: Hit the eye with an arrow. ACTION: Press Red to bring up the item menu. ACTION: move the cursor to the Fairy Bow. ACTION: Press C to equip. ACTION: Press Red to return to playfield. ACTION: Press C to hold fairy bow. ACTION: Move analogue stick to aim. ACTION: Press C to fire arrow. CONSEQUENCE: A second block of ice appears in front of the first, below the longshot target. THOUGHT: What now? RESPONSE: Use longshot to grab the target. WHY? The appearance of the ice block suggests that this is the next logical step. I can't see exactly why this is the case yet, but by this stage I have some instinctive understanding of puzzle logic. ACTION: I press C to hold the longshot. ACTION: I use the analogue stick to aim. ACTION: I press C to 'fire'. CONSQUENCE: I am lifted onto the new block of ice. I immediately see that the original block of ice, now directly in front of me, has on it a 'floor' switch (Behavioural Memory of Objects). I also see that the gap between the two blocks is easily crossed. THOUGHT: What now? THOUGHT: Leap the gap and stand on the switch. ACTION: Move analogue stick forward until Link is standing on the switch. CONSQUENCE: This action triggers an animation showing the fire being extinguished from the chest. THOUGHT: What now? RESPONSE: Drop to the chest and open it. ACTION: Move analogue stick to my right (avoiding a leap back to other ledge) and then back so Link is in front of the special chest. ACTION: Press A to open the chest. CONSEQUENCE: An animation of the chest opening and the Boss Key being presented. I feel a sense of achievement and even elation I am close to completion of this dungeon and close to the end of the quest. I feel a sense of fulfilment. THOUGHT: What now? RESPONSE: Leave the room and go up the stairs through the unbarred/unchained door. ACTION: Manipulate analogue stick to move Link to door of this room. ACTION: Press A to open the door. ACTION: Use analogue stick to move Link out of this room.

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